JOURNAL
OF THE
AMERICAN VETERINARY MEDICAL ASSOCIATION

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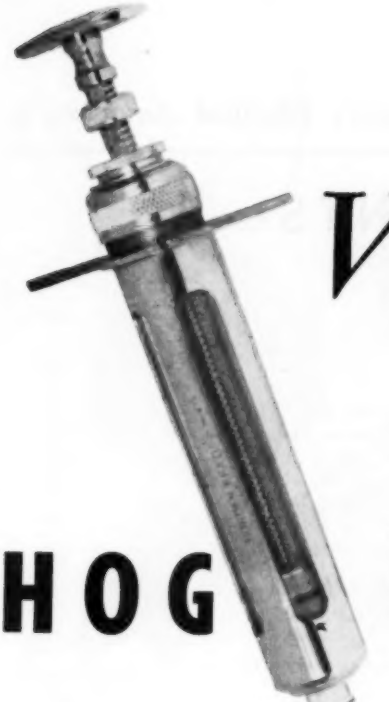

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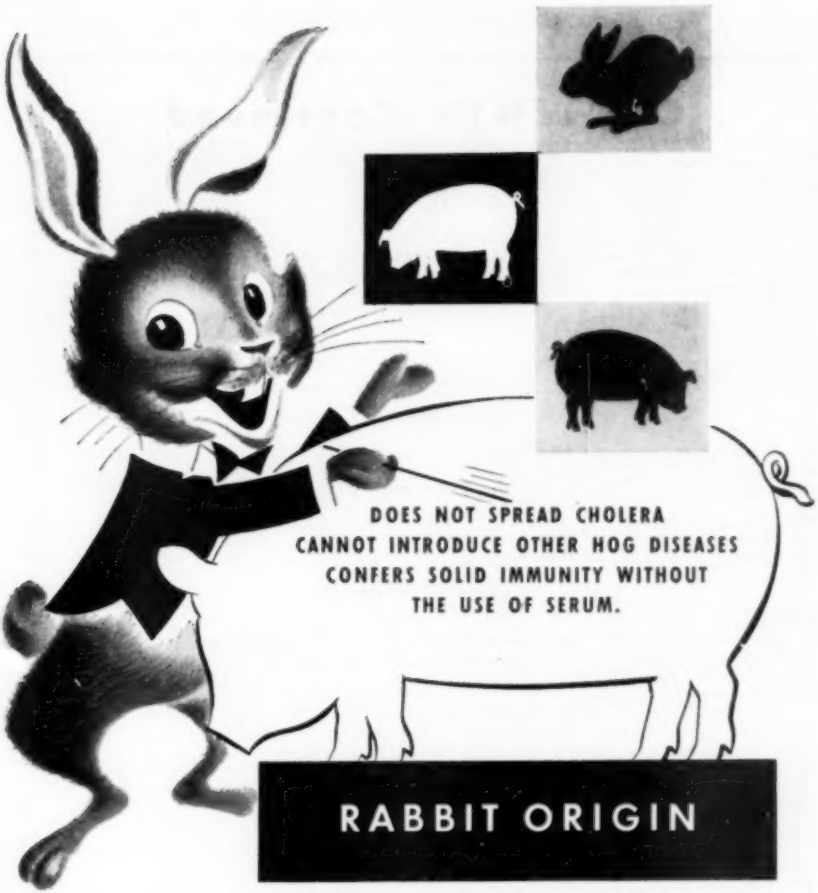

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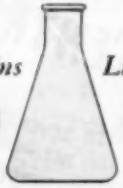

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AVMA ☆ Report

Veterinary Medical Activities

✦ The Association united with other national organizations in urging the Secretary of Agriculture to recognize the widespread occurrence of vesicular exanthema as a threat to the livestock industry. The "national emergency" was declared on Aug. 1, 1952. For details see p. 169 this issue.

★ ★ ★

✦ The Emergency Advisory Committee, consisting of Chairman Dr. W. R. Krill, Brig. Gen. J. A. McCallam, Colonel W. O. Kester, Drs. M. R. Clarkson, F. A. Todd, J. B. Engle, and C. D. Van Houweling, met in Washington, D.C., on July 30. Dr. W. R. Hinshaw, also a member of the committee, was unable to attend the meeting on account of illness.

★ ★ ★

✦ On July 30, Assistant Executive Secretary C. D. Van Houweling met in Washington, D. C., with hog cholera antiserum and virus producers, later accompanying them to conferences with Dr. B. T. Simms, chief of the Bureau of Animal Industry, and Assistant Secretary of Agriculture Knox T. Hutchinson, to emphasize the serious effect vesicular exanthema was having on hog cholera antiserum and virus production.

★ ★ ★

✦ The Board of Governors (Drs. Edwin Laitinen, W. L. Boyd, and Brig. Gen. J. A. McCallam) was in session at Association headquarters on Saturday, Aug. 9, 1952. This meeting preceded a meeting of the Research Fund-Raising Committee (Drs. W. G. Brock, chairman; C. W. Bower; James Farquharson; A. H. Quin; and C. F. Schlotthauer) on Sunday, August 10.

★ ★ ★

✦ President W. L. Boyd represented the Association at the fourth annual convention of the Canadian V.M.A. in St. Andrews-by-the-Sea, New Brunswick, September 15-17. He also attended the meeting of the Central Wisconsin Association in Menomonie on September 10.

★ ★ ★

✦ President-Elect J. A. McCallam represented the AVMA at the Centennial Convention of the American Pharmaceutical Association held in Philadelphia, Aug. 17-22, 1952. He attended the ceremonial session on August 20 at which dignitaries from foreign and domestic societies, and related sciences and professions, were recognized and delivered greetings from their respective groups to the centennial celebration of the A.P.A.

★ ★ ★

✦ Brigadier General J. A. McCallam, president-elect, delivered the closing address to veterinary enrollees at the sixth annual Military Science and Tactics conference held at the Medical Field Service School, Fort Sam Houston, Texas, on August 1. The program listed him in both his official military capacity and as AVMA president-elect.

★ ★ ★

✦ The new members elected by the Executive Board of the AVMA at Atlantic City to serve on the Research Council are Dr. Robert Getty, Ames, Iowa (anatomy and histology), Dr. Jean C. Flint, Salt Lake City, Utah, (small animal medicine), Dr. James E. Greene, Auburn, Ala. (small animal surgery), Dr. C. H. Cunningham, East Lansing, Mich. (virus diseases), and Dr. A. G. Karlson, Rochester, Minn. (veterinary hygiene). Each was elected for a three-year term.

★ ★ ★

✦ Dr. Niel W. Pieper of Middletown, Conn., was elected by the Executive Board to serve a six-year term as one of three members of the executive (inspection) committee of the Council on Education. Dr. Pieper represents the general practice area of veterinary medicine.

★ ★ ★

✦ Dr. W. A. Aitken attended the Wisconsin Postgraduate Conference for Veterinarians, July 22-23, at the University of Wisconsin, Madison. He spoke on the "Responsibilities of a Veterinarian".

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A: It is spread by the bite of an animal that has the disease. It can also be spread if saliva from a rabies victim comes in contact with open scratches or with surface of the eye. Rabid dogs are the most common sources of infection.

Q: Is this disease dangerous to both human beings and animals?

A: Yes. It can kill people, as well as any type of animal. Wolves, foxes, coyotes, squirrels and skunks are spreaders of the disease in some areas.

Q: Is rabies fatal?

A: Yes, it is one of the most dreaded of all diseases. However, it can generally be prevented by protective vaccination.

Q: How successful is vaccination?

A: Very dependable. Authorities now recommend this control program: All dogs in an area should be vaccinated. Stray dogs should be impounded. Any dogs being shipped from one area to another should be required to have a rabies vaccination certificate. This plan has brought rabies under effective control in many communities.

Q: How does one recognize rabies?

A: Suspect rabies when dogs or livestock behave abnormally. Gentle animals become nervous and irritable. Dogs may have dumb rabies, in which their jaws are paralyzed and their mouths hang open; or the furious type where they want to bite anything within reach.

Q: If rabies is suspected, what should one do?

A: Contact a veterinarian immediately. Confine any suspect dog or farm animal. Do not kill the animal. If a person is bitten, call a physician immediately.

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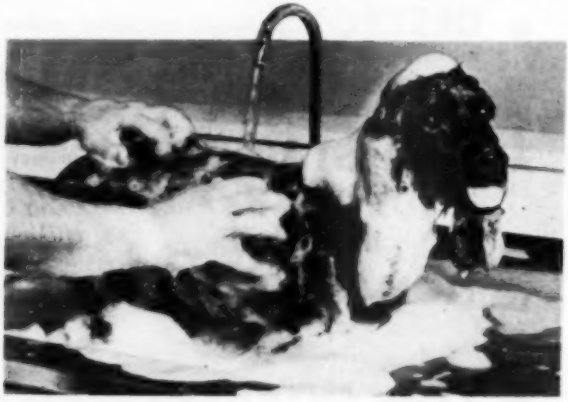

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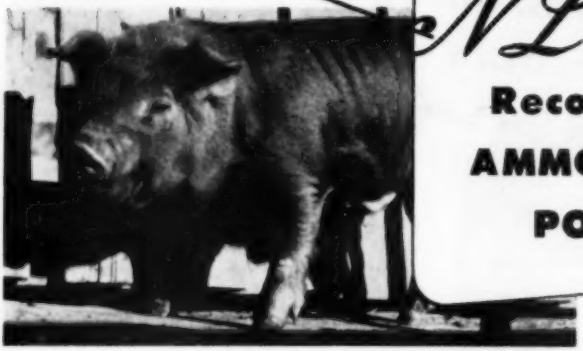

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- **helps discharge mucus**
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Composition: a brown granular, water soluble powder . . . made up of 19% potassium guaiacol sulphonate with potassium and ammonium salts in a special aromatic base.

Dosage: Dissolve 1 lb. of NLC Ammochrome Powder in 1 gallon of water—add 6 to 8 ounces of this diluted solution to each 25 gallons of drinking water and mix.

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Here's an effective, easy-to-dispense remedy to help you combat respiratory troubles. By adding recommended quantities of NLC Ammochrome Powder to the drinking water of infected pigs, respiratory congestion is eased and animals show a quick "pick up." Ammochrome Powder is easily soluble and proves palatable to swine. The use of this treatment will return savings of many times its cost.

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1. BLAMEY, E. R. *Coagulation in Seeping Hemorrhage—Evaluation of Koagamin, New to the Veterinary Field.* J. Am.Vet.M. A. 119:291, 1951.

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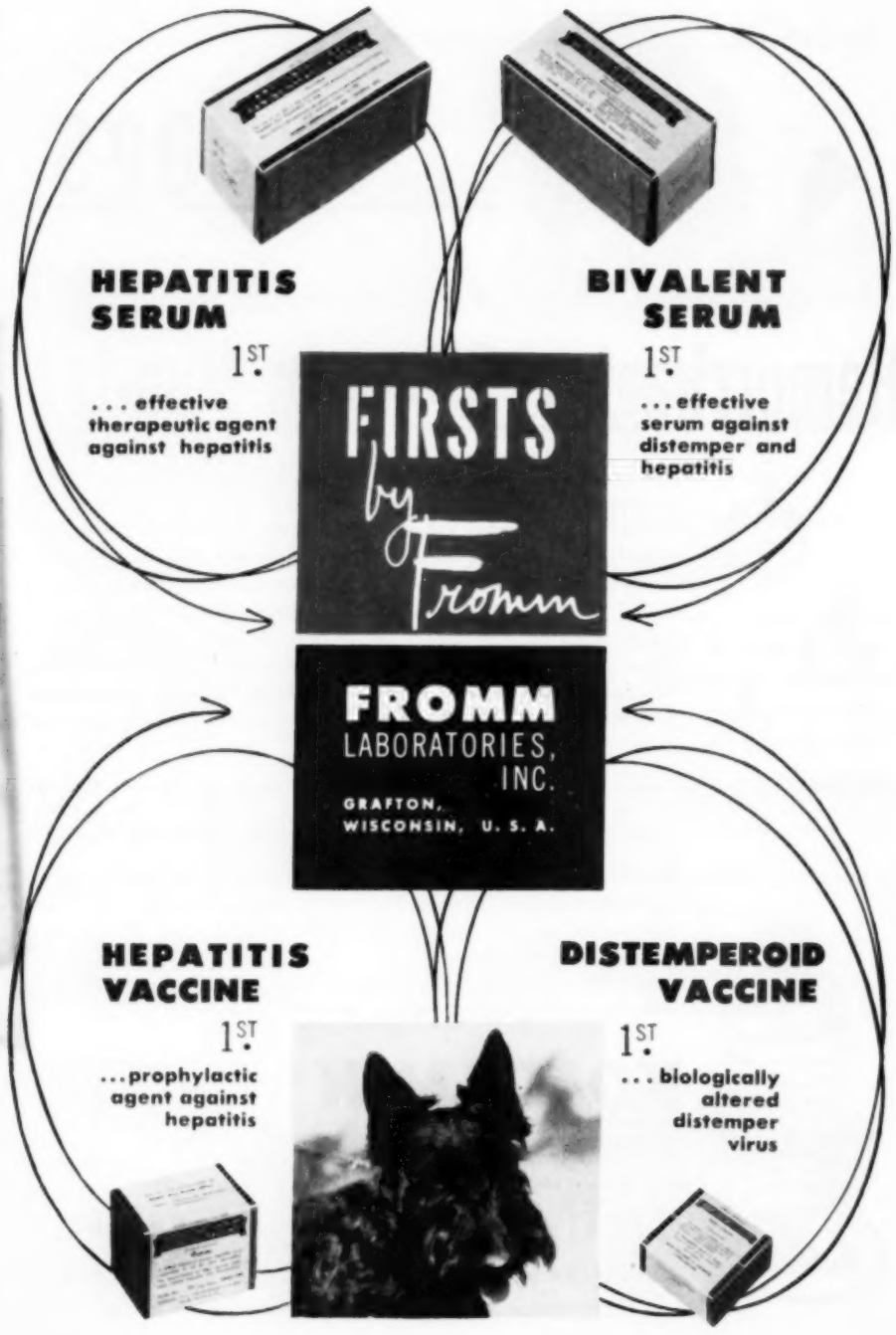
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it's name is

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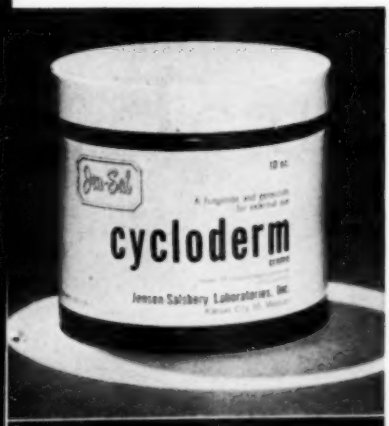
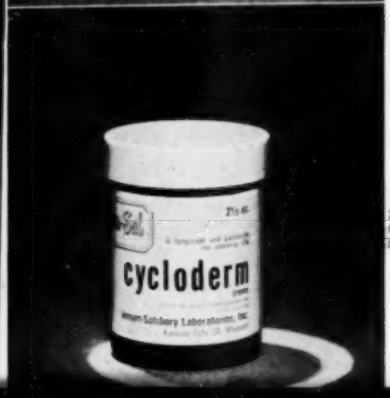


10-oz. hospital jar



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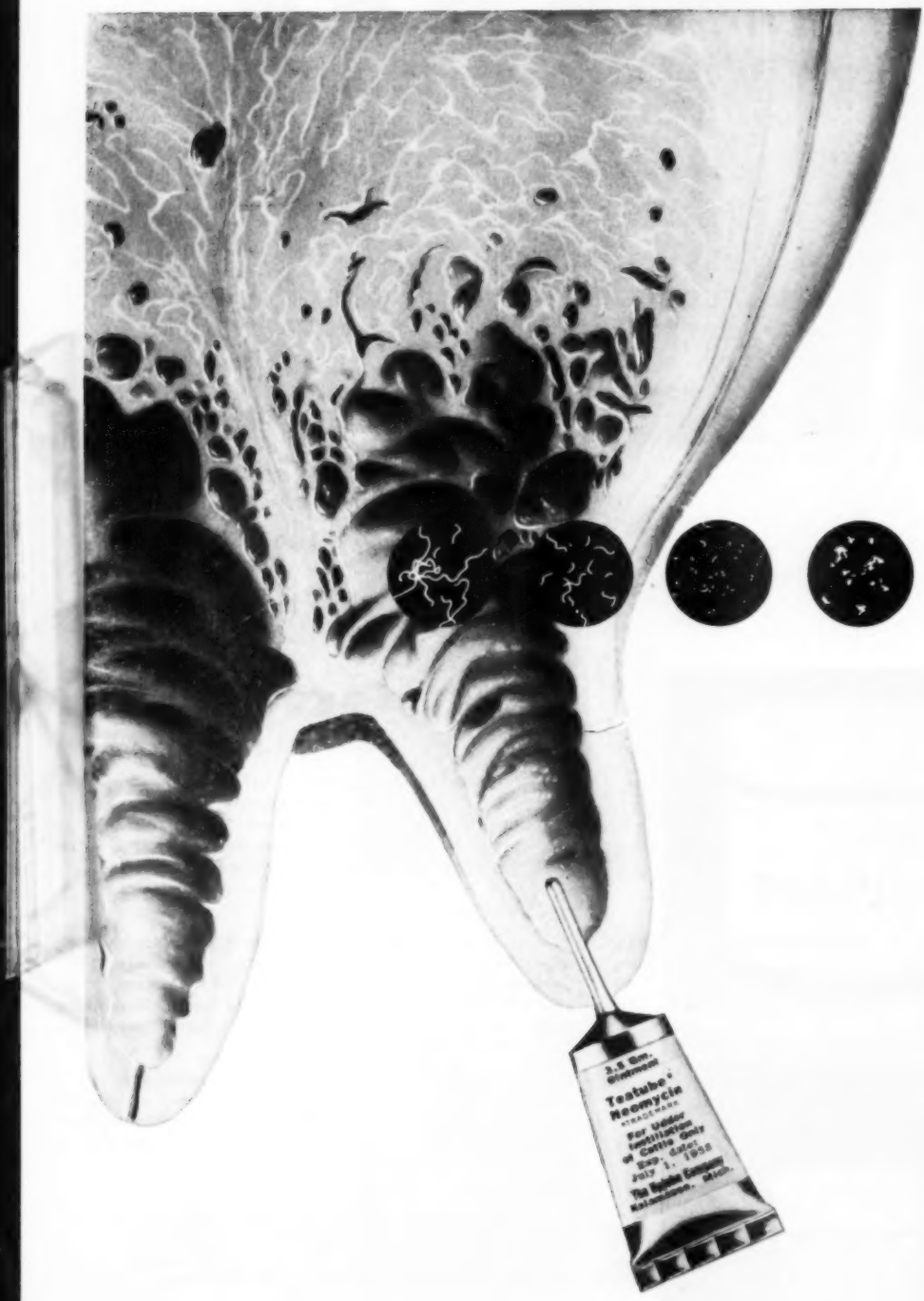
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For Udder
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Streptococcus uberis

Staphylococcus aureus

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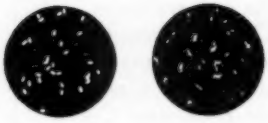
Pseudomonas aeruginosa



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Journal
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VOL. CXXI SEPTEMBER, 1952 No. 906

The President's Address

JOHN R. WELLS, V.M.D.
West Palm Beach, Florida

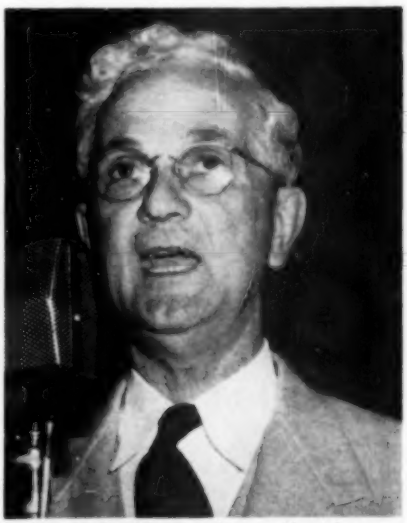
IN AN extremely food conscious world made so by a rapidly enlarging population, the prevention of losses from animal diseases through the application of veterinary service becomes increasingly important. Statisticians of the Bureau of Census tell us that the population in the United States is increasing at the rate of 2,000,000 a year, or more than 5,000 a day, or more than 200 an hour, which means that, by 1975, we will be approximately 200 million people.

With no remaining vast frontiers to settle and put into production, we must do a more efficient job of conserving what we produce. We can not continue to allow 4/10 of the pigs farrowed, 1 out of 5 calves dropped, and 1 out of 6 chickens hatched to die before they reach market age and still continue to supply our rapidly increasing human population with the level of diet now enjoyed. We all know that veterinarians can materially reduce these and other food losses from animal diseases by better application of the scientific principles of modern veterinary medicine. Reduction of these losses and the adequate feeding of our people present a tremendous challenge to the profession.

INTERPROFESSIONAL ORGANIZATION RECOMMENDED

The ever-increasing interrelationship in all branches of medicine demands an even greater coöperation between them. An increased recognition of the importance of animal diseases as related to human health and the importance of veterinary public health work are other indications of this need for closer coöperation.

Our Council on Education has been working closely with its counterparts of the American Medical Association and American Dental Association. In the field of civil defense, as well as in the Armed Forces, there is a close working relationship between veterinary medicine and the other health professions. There are many



President Wells delivering his presidential message at the Opening Session of the AVMA Eighty-Ninth Annual Meeting in Atlantic City.

Delivered at the Eighty-Ninth Annual Meeting of the American Veterinary Medical Association, Atlantic City, June 23-26, 1952.

more fields in which a better understanding between all the medical professions will be beneficial to everyone.

There now exist active interprofessional organizations on the state and local levels in many parts of our country. The same is also needed at the national level; therefore, I recommend that the American Veterinary Medical Association invite the other medical professions to unite in a national interprofessional organization so that the many matters of mutual concern and interest can be approached with a united medical front.

VETERINARIANS NEEDED IN CONTROL OF FOREIGN DISEASES

The ever-present threat of foreign diseases becoming established in America is dramatically brought into focus by the sudden and widespread occurrences of foot-and-mouth disease and anthrax.

Our profession must stand alert and be ready to recognize and meet such a threat. Livestock disease control agencies such as the Bureau of Animal Industry and the state and provincial veterinary departments must be prepared to meet this threat. These agencies, therefore, must have adequate staffs of qualified, trained veterinarians.

Recognizing the urgency of such a need, the AVMA has been extremely active during the past year in an effort to help the Bureau of Animal Industry recruit and retain veterinarians. A committee of the Executive Board, after a thorough investigation, has come to the conclusion that increased compensation and opportunities for training and advancement must be offered by the BAI. The Association has pressed for such advancement, not merely to increase salaries of veterinarians but to better enable our disease control agencies to protect the health of our animals and the people.

INEQUITIES IN VETERINARY CORPS

The AVMA is actively continuing its effort to remove certain inequities suffered by veterinarians in the Armed Forces. As yet, the restoration of a higher commissioned grade, offered veterinarians immediately following graduation, and the inclusion of Veterinary Corps officers in the special pay provision extended to the Medical and Dental Corps officers have not been accomplished. With adequate justification for granting these benefits our Association will continue to press for them.

The Opening Session, June 23, at the Ambassador Hotel in Atlantic City. President Wells

RESEARCH FUND

The accomplishments of the AVMA Research Council through the use of the Research Fund are well documented in the June, 1952, issue of the JOURNAL. At this meeting a drive will be inaugurated to supplement this fund. I call upon each of you to support such a worthy activity with a substantial contribution in order that this notable program can be continued.

MEMBERSHIP

During this administration, my efforts have been primarily directed toward certain internal affairs of the organization, principally membership and finances. I am sorry to report that my membership campaign was not very successful. I believe this was due to one or more of several factors.

1) An apparent apathy of many resident secretaries.

2) A misunderstanding of the methods proposed to be used: that of personal, verbal, home level appeals rather than the writing of letters, as had been done many times in the past with meager results.

3) A disinclination of many veterinarians to support the organization that fights their battles and gives them prestige.

Since new AVMA memberships are dependent upon state association memberships, perhaps some delayed action results of the campaign may yet occur.

FINANCES

My chief interest was finances. I was curious to learn why the AVMA had operated in the red for several years. It was due, I believe, to the overlapping and ill-defined limits of constituted and delegated authority. Except for partial depletion of the surplus funds, no serious consequences have ensued; but to live in excess of one's means is a bad habit to form, and it is not good for organizations or individuals.

I have recommended to the Executive Board, which is the constituted financial authority, that the following steps be taken:

1) Have tentative budget prepared at least two weeks prior to annual meeting and placed in the hands of the Executive Board. This would enable more careful study and checking.

2) Have its monthly and quarterly financial reports so arranged as to show the balance in each budgeted category. This will allow the Board to see at a glance what is left, before authorizing additional expenditures.

3) Instruct executive secretary not to expend funds in excess of any budgeted item, without

(standing, center) has just officially opened the Eighty-Ninth Annual Meeting of the AVMA.

specific instructions from the Board of Governors or the Executive Board.

These steps will keep the constituted authority properly informed at all times, and will protect the delegated authority from the responsibility of putting into effect instructions that would violate the budget.

If those charged with the responsibility of the Association's monies will exert adequate supervision, and those to whom this duty is in whole or in part delegated will use due restraint, then the Association need never again have to resort to deficit spending. I am happy to report that this year the Association operated in the black.

TWO CONTROVERSIAL MATTERS HAVE ARISEN DURING YEAR

Only two controversial matters, with possible far-reaching consequences, have arisen during my term:

1) The recommendation of the Council on Education to scrap the traditional requirement that the head of a veterinary college be specified as a veterinarian. It cited the fact that medical and dental colleges are often headed by others than doctors and dentists. I can not conceive that either medicine or dentistry could become subordinate to any other professional group, but it is not only conceivable but possible for veterinary schools to become subordinate to agriculture or medicine. The veterinary profession has come nearer to "pulling itself up by its own bootstraps," than any I know of; and to take a step, at this late date, that could remove veterinary education from the immediate planning and supervision of veterinarians might be a backward and disastrous step. Only a veterinarian thoroughly understands all phases of veterinary education, and it is my opinion that we should, as long as possible, hold to a stand that the directing head of a recognized veterinary college MUST be a veterinarian.

2) The other controversial subject is a proposed nominating committee to select candidates for the president-elect. If such a nominating committee has functions in excess of merely interviewing and cataloguing candidates, then I am strongly opposed. A nominating committee, irrespective of how constituted or bound around with whatever intended safeguards, if delegated with the power to select or reject possible candidates, has the potential power of selecting your elected officials. One of the proposed safeguards is always the inherent right to nominate from the floor, but a candidate so nominated would not be on a practical par with one proposed by an official nominating committee, since the universal tendency is for a majority of the voting members of any organization to automatically accept the recommendations of such a committee. In my opinion, the only way to maintain the democratic ideal and keep a nominating committee from being dominant is to require that it include the names of any candidates who have the written support of not more than 50 members and that no candidate or candidates be presented as the preference of the committee.

CHANGE IN BY-LAWS RECOMMENDED

I recommend one change in the by-laws as it pertains to official progression. At present, if the president becomes incapacitated he is succeeded by the first vice-president. Several years ago, the president-elect plan was instituted for the purpose of training a man for one year in preparation for the presidency. The president-elect immediately becomes a member of the Executive Board and the Board of Governors. Probably about this same time, the office of vice-president began to assume an honorary status, with no duties or opportunities to learn of internal AVMA matters.

It would seem to me that the logical procedure, therefore, would be for the president-elect to succeed to the presidency in case of an emergency. By the same token of experience, I recommend that the chairman of the Executive Board be added to the line of succession, that is, to move up in case of multiple emergencies. All are elected by the membership and are experienced in AVMA affairs.

CERTIFICATE OF MERIT

It has been suggested that a "certificate of merit" award be established which can be presented to a wide variety of persons who are outspoken friends of the veterinary profession, such as editors, columnists, dog people, livestock leaders, and the like. Such an award could be a real public relations

asset. I urge the Committee on Awards to implement this suggestion.

LEGISLATIVE OFFICE IN WASHINGTON

The newest AVMA service is an embryo Washington legislative office. I believe it to be the most important step taken this year; and as funds become available to expand this activity, it may well prove to be of inestimable value to the entire veterinary profession.

I wish to publicly commend some groups and individuals in our organization. First, the officials, both elected and appointed, and the members of committees, both standing and special. They represent organized veterinary medicine at work. It is they who carry the profession forward. Many of these assignments are difficult and exacting, so, for the loyalty and sacrifice of these men and women, I express the deep gratitude of all of us.

I commend Dr. Brock, chairman of the Executive Board, for putting into effect the plan of preserving our reserve bonds by borrowing against them instead of cashing them in the lean financial time that comes each year. His plan stopped the depletion of these funds.

My compliments to Dr. Van Houweling for so adequately putting into effect Dr. Jakeman's idea for augmenting our membership. He has developed the student chapters to the extent that the enthusiasm of their members for veterinary medicine and the AVMA causes more than 90 per cent of each class to become AVMA members at graduation.

I express the highest commendation to Dr. Hardenbergh for his vision, his calm efficiency, and the skill with which he manages AVMA affairs.

Being president of this great and important association is an arduous duty, but the labor and sacrifice are more than compensated for by an enlarged circle of friends and the satisfaction of having performed a useful service for the profession. I greatly value the honor of having been your president.

Pan American Exhibit Wins First Place

Of the 12 educational exhibits at the Eighty-Ninth Annual Meeting in Atlantic City, the exhibit of the Pan American Sanitary Bureau won first prize (*see* picture). Prepared by Dr. Benjamin D. Blood, it outlined the function of the bureau, with special emphasis on its activities in the field of veterinary public health.

The committee of judges awarded second place to the exhibit on leptospirosis, prepared by Major William S. Gochenour, V. C., U. S. Army. The exhibit depicted the clinical characteristics of leptospirosis in man and animals, portraying reservoirs of infection and how man could acquire infection.

Third place was awarded to the U. S. Public Health Services exhibit on anthrax.

The exhibit of the Pan American Sanitary Bureau at Atlantic City, which was awarded first place.

Highlights of the Eighty-Ninth Annual Meeting
Atlantic City, June 23-26, 1952

In the opinion of objective observers, the Atlantic City session was one of the most outstanding meetings the Association has held, judged from the excellence of the scientific program, the commercial and educational exhibits, entertainment and social

Dr. J. R. Porteus, General Chairman of the Local Committee.

functions, and the interest displayed in the special group conferences and discussions. The whole program plus the unique attractions of the "Playground of America" and the Boardwalk served to draw the largest attendance ever registered at a coast convention.

The total registration was 2,613 and so Atlantic City displaces Cincinnati for second place attendance honors, Milwaukee still being well ahead with its record-breaking figure last year. The standings of the first five convention sites attendance-wise now are:

Milwaukee — 1951	3,128
Atlantic City — 1952	2,613
Cincinnati — 1947	2,226
Detroit — 1949	2,115
San Francisco — 1948	2,111

Official Attendance Figures

The breakdown of registration at Atlantic City is as follows:

Veterinarians (members)	1,373
Veterinarians (nonmembers)	14
Total veterinarians	1,387
Women (711) and children (162)	873
Exhibitors (other than veterinarians)	196
Students	49
Guests	108
	2,613

Geographic Distribution

Every state in the Union was represented and veterinarians were also present from Canada, Cuba, Hawaii, Japan, Mexico, Nor-

Dr. J. B. Engle, General Secretary of the Local Committee.

way, Peru, Puerto Rico, and Thailand. The five states with the largest attendance were Pennsylvania (381), New York (298), New Jersey (290), Ohio (136), and Michigan (122).

In the House of Representatives, delegates or alternates were present from 53 of the 61 constituent associations for the session on June 21.

Instead of a straight alphabetical listing of states, the attendance figures are broken down this year on a regional basis for easy comparison of attendance from various sections of the country. The location of the convention naturally determines the turn-

out from different areas from year to year. An unusual factor this year was the time of the meeting—in June instead of the customary August. This undoubtedly played a large part in the relatively small turn-out from the Middlewest, since June is one of the busiest months for practitioners in those states with large veterinary populations; also, June is not a "vacation" month for many people who often include the AVMA convention in such plans.

In case the general membership is not familiar with the zoning schedule for our conventions, it may be pointed out that the meeting is held every other year in Zone 1 (roughly, the Middlewest and fairly central). Zone 2 (eastern states), Zone 3 (southern), and Zone 4 (western) then alternate with Zone 1 in rotation so that these three zones have the meeting only every six years. For comparison, figures have been compiled on a regional basis for convention attendance for the past several years.

TABLE 1—Geographic Distribution of Registrants, Atlantic City Meeting

NORTH ATLANTIC STATES	
Maine	22
New Hampshire	9
Vermont	17
Massachusetts	50
Rhode Island	18
Connecticut	65
New York	298
New Jersey	290
Pennsylvania	381
Subtotal	1,150
EAST NORTH CENTRAL	
Ohio	136
Indiana	90
Illinois	93
Michigan	122
Wisconsin	29
Subtotal	470
WEST NORTH CENTRAL	
Minnesota	39
Iowa	47
Missouri	42
North Dakota	1
South Dakota	4
Nebraska	19
Kansas	39
Subtotal	191
SOUTH ATLANTIC	
Delaware	29
Dist. of Columbia	48
Maryland	99
Virginia	63
West Virginia	11
North Carolina	29
South Carolina	10
Georgia	39
Florida	41
Subtotal	369
SOUTH CENTRAL	
Kentucky	10
Tennessee	13
Alabama	34
Mississippi	14
Arkansas	2
Louisiana	8
Oklahoma	11
Texas	30
Subtotal	122
WESTERN	
Montana	5
Idaho	1
Wyoming	1
Colorado	5
New Mexico	3
Arizona	1
Utah	1
Nevada	1
Washington	10
Oregon	1
California	33
Subtotal	62
Total U.S.A.	2,364
OTHER COUNTRIES	
Canada	81
Cuba	9
Hawaii	2
Japan	1
Mexico	1
Norway	1
Peru	1
Puerto Rico	4
Thailand	1
Subtotal	101
Miscellaneous	148
Grand Total	2,613

Mrs. C. E. Bild bringing greetings of the Women's Auxiliary to the AVMA at the Opening Session of the Eighty-Ninth Annual Meeting in Atlantic City.

TABLE 2—Attendance at AVMA Conventions from Various Regions, 1947-1952

Year	Location	Zone	Total Registration	Attendance from Various Regions of U. S. A.							
				North Atlantic	East North Central	West North Central	South Atlantic	South Central	Western	U. S. A. Total	Other
1947	Cincinnati	1	2,226	320	1,094	267	195	224	73	2,173	53
1948	San Francisco	4	2,111	116	238	191	71	119	1,304	2,039	72
1949	Detroit	1	2,115	283	1,104	246	137	131	79	1,980	135
1950	Miami Beach	3	1,790	205	360	222	571	267	44	1,669	121
1951	Milwaukee	1	3,128	255	1,597	668	190	203	125	3,038	90
1952	Atlantic City	2	2,613	1,150	470	191	369	122	62	2,364	249

Figures that are underlined indicate convention in this region's zone.

Excerpts from Reports of Officers and Staff Members

Since the meeting this year was two months earlier than usual, the report year was correspondingly shorter and this was reflected in the data customarily presented by some of the officers. However, the in-

Installed as President at Atlantic City

President-Elect W. L. Boyd addressing the Convention after he had been installed as president by Retiring President John R. Wells at Atlantic City.

complete figures will be brought up to date for the annual reports published in the official "Proceedings Book," so as to be comparable to previous years.

Executive Secretary Hardenbergh reported 431 applicants admitted in ten months, and a net gain of 88, but the figure for the full year will be several hundred more when all graduating student admissions are included.

For the first time in six years, Treasurer Kingman reported, income exceeded disbursements. This favorable balance was due largely to increased JOURNAL advertising receipts and larger-than-expected convention receipts in 1951.

The assistant executive secretary of the AVMA, Dr. C. D. Van Houweling, reporting for the professional relations department, mentioned projects of value which could be inaugurated with additional personnel and income. Two projects outlined were (1) the organization of livestock producers and related organizations for the

Treasurer Installed at Atlantic City Meeting

Dr. Harry E. Kingman is installed as treasurer for the year 1952-1953 by President Wells at Atlantic City. Dr. Kingman has been serving as treasurer since April 1, 1952, when Dr. W. A. Young resigned.

purpose of helping practicing veterinarians become established in the marginal areas, and (2) the production of a motion picture depicting modern veterinary medicine.

He also reported on the Association's efforts to have legislation enacted which would enable veterinarians to be commissioned as first lieutenants in the Veterinary Corps immediately after graduation and to secure for Veterinary Corps officers the $100 a month special pay received by Medical and Dental Corps officers. The work of the Executive Board committee to elevate the beginning classification of veterinarians in the U. S. Department of Agriculture from GS-7 to GS-9 was also referred to in the report.

The editor-in-chief, Dr. W. A. Aitken, in his report expressed his appreciation of the help given him by Assistant Editor Mrs. Bayless and other members of the staff while he adjusted himself to the duties he assumed last February.

He also expressed the staff's appreciation of the unselfish and efficient service the Research Council gives to editing the manuscripts for the Research Journal. He announced a new method of selecting associate editors for the JOURNAL of the AVMA in an effort to avoid overlapping of the fields each associate represents.

Mr. Russell G. Rongren, recent addition to the AVMA headquarters staff, reported

on the various areas of office work as it affects membership service, circulation, and public information. His report emphasizes the immediate need to study the membership service problem for the purpose of making changes and improvements where needed.

The report also outlined some of the steps taken toward streamlining routine office functions such as reorganization of the file system, installation of a definite and planned collection and follow-up system for overdue accounts, improving the quality of routine correspondence that leaves the office, etc.

Mr. Rongren also told the House of Representatives and the Executive Board that one of the major problems facing the AVMA today is the need to inform its members how the AVMA works and what it can do for them. The report stressed the point that a selling job must be done among the AVMA membership so that they will fully realize that their national representative body is the only logical organization to initiate and coördinate action on a national level.

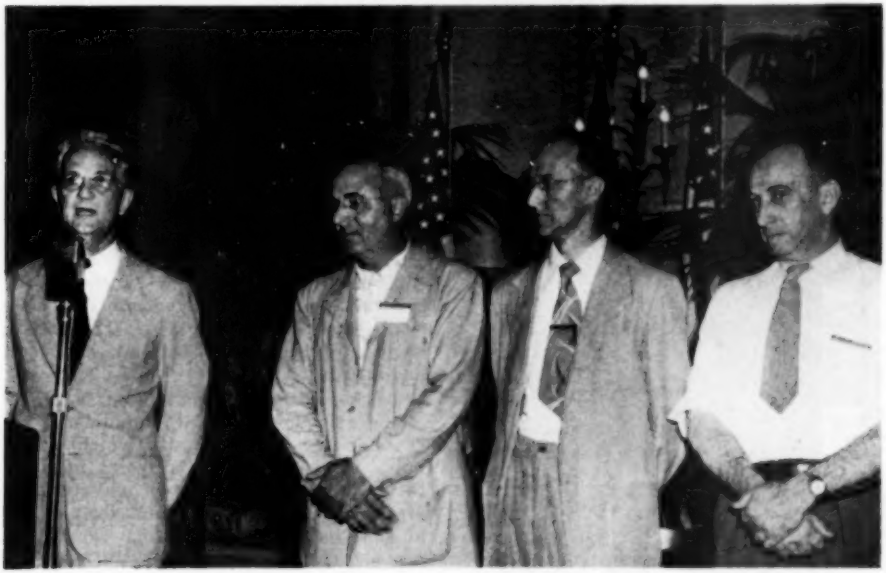
National Board of Veterinary Medical Examiners—Annual Meeting

Twenty members of the National Board of Veterinary Medical Examiners were present for the third annual meeting held on Monday evening, June 23, at the Ambassador Hotel in Atlantic City. Four guests from state examining boards also attended.

The principal business of the meeting was approval of a basic change in the procedure to be followed in offering the examinations to be developed by the Board. After prolonged study during the past year, it was decided that the National Board will offer its examinations and services directly to state boards of veterinary medical examiners rather than to veterinary students as originally planned. Experience has shown that this method is more likely to be accepted by state boards than the idea of a national board diploma; it has the further advantage that it will not require revision or amendment of existing state practice acts for the states which wish to take advantage of the National Board's services. The plan will be further developed during the coming year and announcement of details will be made in due time.

Dr. C. W. Bower, Topeka, Kan., was reëlected as president and Dr. J. G. Hardenbergh as secretary for the ensuing year. The members of the

Vice-Presidents Installed at Atlantic City



President Wells installs the vice-presidents (left to right)—Drs. L. A. Mosher, Mark L. Morris, and H. S. MacDonald. Drs. C. H. McElroy and M. Weadon were absent when the picture was taken.

executive committee of the Board were also reelected for another year, namely, Drs. E. A. Benbrook, John D. Gadd, J. H. Steele, J. H. Yarborough, and Col. G. L. Caldwell.

Award Winners at Atlantic City

Dr. Charles E. Cotton, Minneapolis, Minn., received the Twelfth International Veterinary Congress Prize for "his forthright stand on disease control issues during

Dr. Charles E. Cotton, recipient of the Twelfth International Veterinary Congress Prize

his years as a livestock and sanitary official." He is a past-president of the American Veterinary Medical Association and of the U. S. Livestock Sanitary Association. He also helped plan the Army Veterinary Corps as a branch of the Armed Services at the outbreak of World War I.

In acknowledging receipt of the Twelfth International Veterinary Congress Prize in a letter to Dr. Hardenbergh, Dr. Cotton says, in part:

> I realize that I do not have adequate words to express my deep appreciation of this highest honor from my fellow members of the AVMA. At the first opportunity I wish you would personally thank the membership for me. My health has failed in the past year but I still retain interest in the affairs of the Association and in politics, thus still getting a kick out of life.

Dr. Ralph B. Little, recipient of the Borden Award

Dr. Adam A. Husman, recipient of the AVMA Award

Dr. Adam A. Husman of Raleigh, N. Car., received the AVMA Award for "distinguished service to livestock health in America." He was especially commended for his work in helping to eradicate such serious livestock diseases as dourine, tick fever, bovine tuberculosis, brucellosis, and foot-and-mouth disease.

Dr. Ralph B. Little, Princeton, N. J., received the Borden Award and Medal for "outstanding research work which contributes to the control of diseases of dairy cattle" while at the School of Veterinary Medicine, University of Pennsylvania, and at the Rockefeller Institute. He was especially commended for his work on the value of colostrum to newborn calves, on brucellosis, and on mastitis.

New Jersey Team Wins AVMA Golf Trophy

What was termed by local residents to be "most unusual" weather—a steady rain—did not dampen the enthusiasm of the 30 golfers who competed in the AVMA golf tournament in Atlantic City on June 23. No doubt the inundated fairways

Dr. James M. Delaney, of the victorious New Jersey team, receives the golf trophy from Dr. J. A. S. Miller, chairman of the subcommittee on entertainment.

were a factor in the high scores posted by some participants. In spite of this handicap, which was perhaps not as severe for the New Jersey team, as "home folks", they beat out the Iowa team in a close contest. Members of the victorious New Jersey team were Dr. James M. Delaney of Mount Holly and Dr. Lewis E. Esther of Arlington. The members of the second place team, of Iowa, which won the 1951 tournament in Milwaukee, were Dr. J. W. Sexton of Sumner and Dr. C. C. Tucker of Cedar Rapids.

The medalist of the tournament was Dr. Tucker of the Iowa team. The Iowa team of Sexton and Tucker also won the low ball team division. Dr. A. H. Quin, Kansas City, Mo., won the exhibitor's division. Dr. G. M. Stewart, Brentwood, Md., had the highest score, 116, and was presented with a set of steak knives, with which he can attempt to whittle down his score. Dr. J. D. Fortenberry, Supply, Va., won the blind bogey division. A special prize, an inflated plastic "Donald Duck", for being the best swimmer was awarded to Dr. A. D. Glover, Jr., of Canton, Mo., who fell into one of the deeper water holes while making a particularly difficult shot. The intention was perhaps that Dr. Glover carry the "life preserver" with him on future wet rounds of golf.

In spite of the rain and consequently high scores, the tournament was good fun for all and the competition was keen. No doubt the New Jersey and Iowa teams will be at Toronto for another try at the AVMA golf trophy.

Dr. A. D. Glover, Canton, Mo., receives the special golf prize, a Donald Duck life preserver, from Dr. J. A. S. Miller.

After attending the Eighty-Ninth Annual Meeting of the AVMA in Atlantic City, June 23-26, 1952, these veterinarians and their wives enjoyed a holiday at the Castle Harbour Hotel in Tucker's Town. They are (by couples, left to right)—Dr. and Mrs. William J. Gay of Woodstock, Ill.; Dr. and Mrs. E. R. VanderWall of Traverse City, Mich.; Dr. and Mrs. H. S. Atkins of Flint, Mich.; Dr. and Mrs. T. W. Liggett of Lisbon, Ohio; Dr. and Mrs. Walter M. Johnson of Plymouth, Wis.; Dr. and Mrs. A. W. Emery of Waterford, Mich.; and Dr. and Mrs. A. G. Misener of Chicago, Ill.

Closed Circuit Television at Convention Adjudged Outstanding

Through the coöperation and support of Allied Laboratories, Inc., and Radio Corporation of America, the General Practice, Small Animal, and Surgery and Obstetrics Section officers for the 89th Annual Meeting of the AVMA were again able to include closed circuit television as a part of their programs. The use of large receivers strategically placed around the walls of the meeting rooms (see picture) provided a clear, bright view of the details of all demonstrations performed before the television cameras. All viewers were enthusiastic about the TV program at the Atlantic City meeting and favored the use of the several receivers over the large screen used at the 1951 meeting in Milwaukee. Dr. L. E. Fisher of Berwyn, Ill., acted as coördinator of all the television presentations and as the general announcer for the television program.

This year, the demonstrations and operations were performed in a storage area on the ground floor of the Ambassador Hotel. The pictures and sound were again transmitted by cables to the 44 receivers in the meeting rooms. Demonstrating and operating in improvised quarters certainly taxes the ability and ingenuity of all participants. An added handicap this year was a lack of space and no place for "storing" the animals between demonstrations. Through careful advance planning and the enthusiastic coöperation of all, the demonstrations were presented smoothly and on schedule.

Altogether, 18 demonstrations and surgical exercises were televised. These demonstrations were interspersed throughout the programs of the three sections mentioned above. The presentations included demonstrations with, or surgery on, chickens, cattle, dogs, hogs, and horses. There was a narrator for each demonstration. Questions from the meeting room were relayed to the TV demonstrators and answered by the narrator or demonstrator.

All participants performed ably. There was wonderful team work between demonstrators, narrators, section officers, and the television crews.

Closed Circuit Television Programs Being Viewed in Atlantic City

The Renaissance Room at the Ambassador Hotel, Atlantic City, where the closed circuit television programs were viewed. The receivers can be seen along the wall. A like number of receivers were installed also on the opposite wall, which the men facing the camera are viewing.

No small part of this fine coördination was due to the untiring efforts of Mr. Walter Lawrence of R.C.A., who was in charge of the techniques of the demonstrations, and to Mr. John Jewett of Pitman-Moore Co., the sponsor of the TV programs.

Everyone was grateful to Drs. T. M. Goldhaft and N. E. Wernicoff, members of the local committee, who were responsible for providing the necessary animals and equipment for a job well done. It is hard to imagine the multitude of details involved in the arrangements necessary for "live" television presentations. Drs. Goldhaft and Wernicoff had meticulously made the necessary arrangements in advance and always seemed to have just what was necessary when it was needed.

Post-Convention Conference on Anthrax and Foot-and-Mouth Disease Was Well Attended

Over 150 convention attenders delayed their departure from Atlantic City to attend the conference on foot-and-mouth disease and anthrax on July 26. In spite of the heat and a natural desire to depart from Atlantic City since the annual meeting was over, the interest in the subjects held the crowd almost intact to the end.

Dr. Ralph West, president of the U.S. Livestock Sanitary Association, presided at the meeting. After a brief word of welcome from AVMA President W. L. Boyd, Dr. F. A. Todd, veterinarian with the Federal Civil Defense Administration, discussed the significance of these diseases and the conference to the civil defense program.

Drs. T. Childs and K. F. Wells, representing the Dominion Department of Agriculture, ably reviewed the history of the foot-and-mouth outbreak in Canada and outlined the control and eradication program in progress. Their presentations, which were well illustrated with maps, charts, slides, and a motion picture, were interesting and comprehensive. Dr. C. L. Gooding, in charge of the Inspection and Quarantine Division of the Bureau of Animal Industry, outlined the precautionary measures taken in the United States since the disease appeared in Canada. Dr. W. A. Hagan, dean of the New York State Veterinary College, stressed the importance of improved diagnostic tests and additional research on the exotic diseases if we are to be prepared to cope with them in the event they do occur in the United States.

Dr. J. T. Burriss, Ohio Veterinary Medical Association president, related how their association had coöperated effectively with the state and federal agencies in civil defense activities. Dr. H. G. Geyer, chief of the Ohio Division of Animal Industry, reported on how they had handled the unprecedented occurrences of anthrax, resulting from the ingestion of contaminated, imported bone meal. Dr. B. T. Simms, chief of the Bureau

Mr. Walter Lawrence (left) of R.C.A., with Dr. L. E. Fisher, Berwyn, Ill., who was the general announcer and coordinator for the TV program at Atlantic City. Mr. Lawrence was in charge of the technical aspects of the presentations.

of Animal Industry; Dr. R. J. Helvig, substituting for Dr. C. B. Spencer of the U. S. Public Health Service; and Mr. John L. Harvey, associate commissioner of the Food and Drug Administration, reported the actions and responsibilities of their respective federal agencies in regard to the control of anthrax.

Following the formal papers, there was considerable discussion of the anthrax problems by conferees. Dr. R. A. Hendershott, secretary-treasurer of the U.S. Livestock Sanitary Association, reported for that organization's special committee on anthrax and called attention to the post-"bacterinization" difficulties encountered in New Jersey.

Dr. West said in his concluding remarks, "I don't recall any meeting when so much was covered in such an interesting manner," and everyone attending seemed to agree.

The complete report of the conference will be published in the 1952 AVMA "Proceedings Book."

Wisconsin Boy Wins Humane Award

For risking his own life to rescue 5 horses from a burning barn last year, a 14-year-old boy, Joe Brown, of Nashotah, Wis., was voted the Humane Act Award of the American Veterinary Medical Association at the Eighty-Ninth Annual Meeting in Atlantic City last June.

The award committee reported that when the boy saw flames shooting from the roof of the horse barn, he had his sister, Marea, call nearby fire departments while he rushed into the building to save the horses. He led out 5 valuable show horses, one by one, and only 1 animal broke loose while being led out. After he had rescued the horses, the boy returned to the barn and pulled out five valuable buggies used for show purposes.

—Roy H. Bradbury, D.V.M.

Joe Brown (left), Nashotah, Wis., was awarded the AVMA Humane Act Award and a $100 bond at the Atlantic City meeting. Because Joe could not be present at that time, Dr. O. Norling-Christensen presented the award and the bond to him in Madison, Wis., on July 22, 1952.

Then he took a fire extinguisher and helped to battle the blaze.

Paul Siepmann, owner of the horses, estimated that the horses Joe saved were worth at least $60,000, as they were prize-winning show animals.

Since Joe Brown could not be in Atlantic City to receive the $100 bond and certificate, Dr. George W. Mather, chairman of the Committe on Awards, made the presentation to Dr. O. Norling-Christensen, Executive Board member from the Third District. Dr. Christensen presented the bond and certificate to Joe at the summer meeting of the Wisconsin Veterinary Medical Association in Madison on July 22, 1952.

Pre-Convention Conference Was an Outstanding Success

The pre-convention conference on "What Can be Done to Eliminate the Illegal Practice of Veterinary Medicine?" held June 22 in Atlantic City was well attended and provided plenty of material for the consideration of all who attended. Fortunately, the value of the discussions will spread far beyond the meeting room, since the conference proceedings will be published in the 1952 "Proceedings Book" of the AVMA meeting.

Although there probably were no definite conclusions which can immediately be placed into action to eliminate illegal practice, there is no doubt that the conference did furnish a great deal of helpful advice that can be put to good use. The participating groups, the secretaries, editors, veterinary medical examiners, and public relations and ethics committee workers met separately for two hours in the afternoon. Without a doubt, these discussions helped focus attention on the obstacles encountered in any effort to eliminate illegal practice.

Well over 100 attended the morning session, most of whom attended the luncheon session and heard an outstanding talk by Mr. Oliver Field, director of the Bureau of Investigation of the American Medical Association, on the work of that bureau. He also related a number of cases involving veterinarians and drugs having veterinary medical aspects as well as the human aspect.

The conference voted unanimously to continue the pre-convention conference as a part of the total AVMA convention program.

Keen Interest Displayed at Supper Meeting of Student Chapter Delegates

The AVMA was host to student chapter and Auxiliary delegates and faculty members from 17 of the 19 schools at a supper on Sunday, June 22, in Atlantic City. Dr. John R. Wells served as toastmaster and interspersed the introduction of the AVMA and Auxiliary officers to the students and their wives with some choice bits of humor.

After the meal, the representatives of the student

auxiliaries met with the officers of the Auxiliary to the AVMA. The chapter delegates and faculty advisers met with Dr. C. D. Van Houweling, assistant executive secretary of the AVMA, for a discussion of matters of mutual interest.

It was unanimously agreed that the meeting of students and their wives with the officers of the Women's Auxiliary and the AVMA be continued. A complete report of the meeting of the chapter representatives prepared by J. Ellis Croshaw, Jr., a student from the New York State Veterinary College, who acted as secretary, will be sent to all attending and to chapter officers.

Research Fund Drive Off to Good Start

Well advertised by posters and "kicked off" by Dr. A. H. Quin's talk at the Opening Session, the drive for money to replenish the Research Fund got away to a good start at Atlantic City.

An immediate response in the form of a $500 check came from the American Veterinary Exhibitors Association. It was soon followed by a check for $1,500 from the Haver-Glover Laboratories, Kansas City, Mo. Contributions totaling $380 came from ten women's auxiliary organizations. They included the auxiliaries of the student chapter at Iowa State College and of the following constituent associations: Illinois, Iowa, Maine, Maryland, Michiana, Southeast Michigan, Ontario, Texas, and Vermont.

To date, $1,397 has been received from 56 individuals and $730 more has been pledged by eight others. Thus, the total received and pledged during the first few weeks of the drive is $4,127. Many others will wish to contribute but before doing so they should carefully read the report in the June, 1952, JOURNAL entitled, "Ten Years of Progress by the Research Council," by the council chairman, Dr. M. A. Emmerson. We believe that no one can read that fine report without a feeling of pride and a desire to share in such a grand enterprise. How could anyone better invest in the future of veterinary medicine?

Mr. Frank Bickal, president of the Veterinary Exhibitors' Association, presenting a $500 check to President Wells for the Research Fund.

Charter Members of the Women's Auxiliary at Atlantic City.

Mrs. J. D. Grossman (left, seated), Mrs. S. E. Hershey, Mrs. Guy Graham (left, standing), Mrs. C. D. Folse.

Some Actions of the Executive Board and House of Representatives

The "Proceedings Book" of the 1952 Annual Meeting of the AVMA will contain the complete report of business transacted. The following items are of special interest.

1) Dr. Thomas G. Hull, director of scientific exhibits, American Medical Association, and author of "Animal Diseases Transmissible to Man", was elected to honorary membership.

2) Eleven members were elected to life membership.

3) Dr. Niel W. Pieper, general practitioner of Middletown, Conn., was elected to a six-year term as a member of the executive committee of the

Council on Education to replace Dr. W. A. Aitken, now AVMA editor-in-chief.

4) The House voted to adopt the following version of paragraph 2, relating to organization, of the "Essentials of an Acceptable Veterinary Medical School":

> When a veterinary school is a part of a larger educational institution, it shall be approved only when it is established as a major administrative unit headed by a veterinarian. He should have the title and authority commonly conferred by the institution to designate the heads of other divisions, schools, or colleges of equal rank.

5) Increased Washington representation on legislative matters was approved.

6) A new fund-raising campaign to replenish the Research Fund was approved and inaugurated during the convention, to be followed by a direct mail appeal.

7) The proposal presented last year to increase the annual membership dues to $15, effective Jan. 1, 1953, was unanimously adopted.

8) The House voted to hold the 1955 convention in Minneapolis, Minn., instead of Cleveland, Ohio, as recommended by the Executive Board.

9) Dr. Edwin Laitinen, West Hartford, Conn., was elected by the Executive Board as its chairman for the ensuing year.

AVMA Meeting a Half Century Ago

I remember distinctly attending the first meeting of the AVMA that was held in Atlantic City, Sept. 3-6, 1901. The meeting was held in the old Rudolph Hotel, and I think there were about 250 in attendance. Dr. Tait Butler of Indiana presided and Dr. J. F. Winchester of Massachusetts was elected to succeed him.

A clinic was held in a tent pitched on the sand at the side of the hotel. Several horses and a cow were used to demonstrate surgical operations. I remember assisting the late Dr. George H. Berns of Brooklyn, N. Y., to perform a tendon operation on a horse. Small animals were conspicuous by their absence.

On the last day of the meeting, the news of the assassination of President William McKinley reached Atlantic City and cast gloom over the whole country.

Dr. S. E. Hershey, of West Virginia, Dr. R. S. MacKellar, Sr., of New York, and Dr. H. Preston Hoskins, of Illinois, on the beach at Atlantic City. They also attended the 1901 meeting of the AVMA when it met in Atlantic City.

Very few of the men who attended this meeting fifty-one years ago are alive today, but we owe them a debt of gratitude for the work they did in advancing the cause of veterinary medicine.

The AVMA has made wonderful progress in the past half century, and time marches on.—R. S. MacKELLAR, Sr., *New York City.*

The President-Elect and Other Officers Named at Atlantic City

Brigadier General James A. McCallam was unanimously named president-elect of the American Veterinary Medical Association at the Opening Session of the Eighty-Ninth Annual Meeting. He succeeds Dr. Willard L. Boyd who was installed as president at the Closing Session in Atlantic City.

Born May 13, 1894, in Philadelphia, he graduated from high school and then entered the School of Veterinary Medicine, University of Pennsylvania, from which he received his V.M.D. degree in 1917. He was appointed as second lieutenant in the Regular Army, Veterinary Corps, in July, 1917. During World War I, he had duty at Camp Stewart, Texas, Camp Courchesne, N. M., Camp Greenleaf, Ga., Ft. Ringgold, Texas, with the 12th Cavalry at Columbus, N. M., and was stationed for a time in Chicago for instruction in meat inspection.

A graduate of the Army Veterinary School in 1924 and an honor graduate of the Medical Field Service School in 1924, he served through the various grades, being promoted to the grade of Colonel, Regular Army, in 1943. His record of service includes assignment as division veterinarian in Hawaii; headquarters veterinarian of the Remount Purchasing and Breeding Headquarters, Central Remount Zone; instructor and officer in charge, Medical Department Reserve, Kansas City, Mo.; instructor at the Engineer School, Fort Belvoir, Va.; instructor in the Department of Animal Transport, Field Artillery School, Fort Sill, Okla.; Corps Area veterinarian, 8th Corp Area; and army veterinarian, Sixth Army Headquarters.

During World War II, Colonel McCallam served overseas with the Sixth Army in Australia, New Guinea, and in Leyte and Luzon in the Philippines, and finally with the occupation forces in Japan whence he was recalled to be appointed director of the Veterinary Division, Office of the Surgeon General, effective Jan. 10, 1946, succeeding the late Brig. Gen. R. A. Kelser who retired in December, 1945. In March, 1946, he was awarded the Legion of Merit Medal and Bronze Star Medal. He was promoted to the grade of Brigadier General on Jan. 24, 1948.

General McCallam joined the AVMA in 1918 and was elected first vice-president in 1948-1949. He was a member of the U. S. Committee on the Fourteenth International Veterinary Congress and was one of the official delegates from this country; he is also a member of the present committee for

Brig. General James A. McCallam, president-elect.

the Fifteenth Congress to be held in Stockholm in 1953. He has also represented the Army Veterinary Corp as a delegate in the AVMA House of Representatives since 1949. He has been an associate editor for the JOURNAL since 1946. He is a member of the District of Columbia Veterinary Medical Association and was its president in 1949-1950. He is also a member of the Pennsylvania State Association, the U. S. Livestock Sanitary Association, and several other professional and service organizations. His fraternal and club affiliations include the Masons, Alpha Psi, and Phi Zeta; also the Army and Navy Club in Washington.

General McCallam married Miss Lillian Gailey in 1917. There have been two children — a son, James A., who was killed in action in Italy, in 1944, and a daughter, Doris, who was recently married.

OTHER OFFICERS ELECTED

The five vice-presidents of the Association for the ensuing year, who were elected at the annual meeting in Atlantic City, are: first vice-president, Dr. L. A. Mosher, Atlanta, Ga.; second, Dr. M. L. Morris, Topeka, Kan.; third, Dr. H. S. MacDonald, Toronto, Can.; fourth, Dr. C. H. McElroy, Stillwater, Okla.; and fifth, Dr. M. Weadon, Washington, D. C.

Dr. Harry E. Kingman, Jr., Chicago, Ill., was elected treasurer of the AVMA at the Atlantic City meeting for the ensuing year.

When Moving, Notify the AVMA

Infectious Equine Encephalomyelitis in the United States in 1951

The Bureau of Animal Industry reports that 762 cases of equine encephalomyelitis were reported from 28 states during 1951. This is the lowest number of cases reported since the Bureau began its annual survey of the disease about fifteen years ago. The mortality was just 26 per cent, compared to 41 per cent in 1950 and 60 per cent in 1949. Only the Mountain States had more cases than in previous years and 85 per cent occurred from July to October. No vaccinated animals were reported to have been affected.

Connecticut reported an epizoötic of eastern equine encephalomyelitis in pheasants. Several hundred birds died but no cases in horses or human beings were reported in that state.

(See opposite page for table 1)

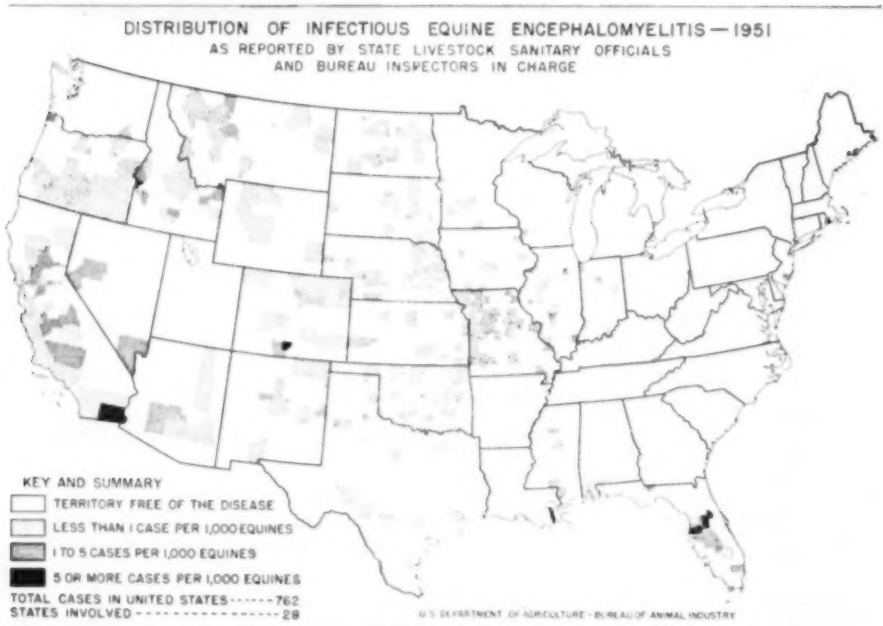

DISTRIBUTION OF INFECTIOUS EQUINE ENCEPHALOMYELITIS — 1951
AS REPORTED BY STATE LIVESTOCK SANITARY OFFICIALS
AND BUREAU INSPECTORS IN CHARGE
KEY AND SUMMARY
TERRITORY FREE OF THE DISEASE
LESS THAN 1 CASE PER 1,000 EQUINES
1 TO 5 CASES PER 1,000 EQUINES
5 OR MORE CASES PER 1,000 EQUINES
TOTAL CASES IN UNITED STATES ------ 762
STATES INVOLVED ------ 28
U.S. DEPARTMENT OF AGRICULTURE - BUREAU OF ANIMAL INDUSTRY

Fig. 1—Distribution and degree of incidence of infectious equine encephalomyelitis, 1951.

TABLE I—Infectious Equine Encephalomyelitis. Summary of Reports on Incidence and Mortality by States, 1951

State and division	Horses and mules in affected areas	Animals affected	Cases per 1,000 horses and mules	Total deaths	Deaths per 100 affected animals	Month of report of— First case	Last case
Maine	—	0	—	0	—	—	—
New Hampshire	—	0	—	0	—	—	—
Vermont	—	0	—	0	—	—	—
Massachusetts	—	0	—	0	—	—	—
Rhode Island	—	0	—	0	—	—	—
Connecticut	—	0	—	0	—	—	—
New England	—	0	—	0	—	—	—
New York	—	0	—	0	—	—	—
New Jersey	304	1	3.3	1	100	December	December
Pennsylvania	—	0	—	0	—	—	—
Middle Atlantic	304	1	3.3	1	100	December	December
Ohio	—	0	—	0	—	—	—
Indiana	7,885	6	.8	4	67	January	October
Illinois	23,557	22	.9	15	68	March	December
Michigan	—	0	—	0	—	—	—
Wisconsin	3,643	2	.5	1	50	August	September
East North Central	35,085	30	.9	20	67	January	December
Minnesota	12,948	5	.4	1	20	May	September
Iowa	22,004	18	.8	4	22	May	October
Missouri	164,024	90	.5	29	32	May	November
North Dakota	41,393	26	.6	8	31	May	October
South Dakota	34,065	23	.7	5	22	May	September
Nebraska	72,250	57	.8	14	25	June	October
Kansas	38,715	32	.8	12	38	January	December
West North Central	385,399	251	.7	73	29	January	December
Delaware	—	0	—	0	—	—	—
Maryland	—	0	—	0	—	—	—
Virginia	2,168	1	.5	1	100	September	September
West Virginia	—	0	—	0	—	—	—
North Carolina	—	0	—	0	—	—	—
South Carolina	—	0	—	0	—	—	—
Georgia	—	0	—	0	—	—	—
Florida	12,109	56	4.6	56	100	May	December
South Atlantic	14,277	57	4.0	57	100	May	December
Kentucky	—	0	—	0	—	—	—
Tennessee	—	0	—	0	—	—	—
Alabama	5,876	4	.7	4	100	June	June
Mississippi	20,597	7	.3	1	14	July	October
East South Central	26,473	11	.4	5	45	June	October
Arkansas	—	0	—	0	—	—	—
Louisiana	415	10	24.1	10	100	July	July
Oklahoma	97,128	68	.7	32	47	January	November
Texas	36,277	24	.7	10	42	January	November
West South Central	133,820	102	.8	52	51	January	November
Montana	34,539	20	.6	1	5	July	September
Idaho	33,191	59	1.8	10	17	May	October
Wyoming	20,438	14	.7	4	29	April	October
Colorado	49,938	76	1.5	12	16	June	October
New Mexico	15,658	14	.9	6	43	July	September
Arizona	25,253	13	.5	5	38	February	September
Utah	—	0	—	0	—	—	—
Nevada	4,629	22	4.7	4	18	February	October
Mountain	183,646	218	1.2	42	19	February	October
Washington	1,982	1	.5	1	100	September	September
Oregon	35,567	23	.6	6	26	May	November
California	81,219	68	.8	17	25	April	October
Pacific	118,768	92	.8	24	26	April	November
Total or Average	897,772	762	.8	274	36	January	December

Veterinary Corps Legislation Dies with Adjournment

The expansion of the Veterinary Corps of the Army and Air Force since the Korean War began served to emphasize the need for corrective legislation for veterinarians in the Armed Forces. The AVMA recognized this need and initiated action toward that end in the 82nd Congress but without success. Although the events leading to the introduction of this legislation and the subsequent developments have been reported in the JOURNAL, it is believed a brief review is desirable.

Beginning in 1947, veterinarians have been required to accept military commissions as second lieutenants until the first anniversary of their graduation. For the twelve previous years, the commissioned grade available immediately after graduation was first lieutenant. Although that portion of the Officer Personnel Act of 1947 was vigorously opposed by the AVMA (*see* JOURNAL, May and July (1947): 340-341 and 87-88, respectively), it was adopted for the stated reason that veterinarians at the time of graduation did not have as many years of "constructive service" as did the graduates of schools of medicine, dentistry, and theological seminaries. This "constructive service" credit was based upon the total years of college education required to receive a degree; and the five years required to get a D.V.M. degree was less than the time required to earn an M.D. or D.D.S. degree.

JUSTIFICATION FOR AMENDMENT

Beginning in 1949, all schools of veterinary medicine required a minimum of two years of preprofessional education to be followed by the regular four-year professional course. The word "minimum" is used advisedly, since less than half of the students admitted in the fall of 1949 and 1950 had only the minimum two years preprofessional education—47 per cent to be exact (*see* JOURNAL, May (1951): 338). Twenty-seven per cent had three years, and 26 per cent had four years. Of the students admitted in 1951, only 40 per cent had the minimum of two years of preprofessional education, 32 per cent had three years, and 28 per cent had four years (*see* JOURNAL, Dec. (1951): 466-467).

Figures taken from the "Dental Student's Register," 1950-1951, published by the American Dental Association, reveal that the predental training of undergraduates in the regular course in dental schools of the United States in October, 1950, was as follows: two years, 38 per cent; three years, 25 per cent; and four or more years, 36 per cent. Of the latter group, 32 per cent had degrees; but, likewise, of the students admitted to the veterinary medical schools in the United States in 1951, 32 per cent also had degrees when admitted.

BILLS INTRODUCED

Armed with these data, the Association decided it was in a position to seek legislation amending the Officer Personnel Act of 1947 and to restore to veterinarians the right to be commissioned as first lieutenants immediately following graduation, as are dentists, physicians, and ministers entering their respective professional corps. Representative Paul J. Kilday (D), Texas, and Senator Lester C. Hunt (D), Wyoming, introduced the desired legislation, H.R. 6533 and S. 2738, on Feb. 11, and Feb. 26, 1952, respectively, at the request of the AVMA (*see* JOURNAL, May (1952): 320). As is the custom in Congress, the bills were referred to the respective Armed Services Committees who, in turn, referred them to the Department of Defense and the Bureau of the Budget for opinion and recommendation.

DELAY ENCOUNTERED

That is when the difficulty began. Assurances were received from the chairmen of the Armed Services Committees and the sponsors of the bills that, when the recommendations of the Department of Defense were received by the Committees, an effort would be made for early consideration and hearings. However, the Committees would take no action until the recommendations of the Defense Department were received.

When it began to appear that there would be a delay in getting recommendations from the Department of Defense, efforts to expedite its action were made without success (*see* JOURNAL, June, July, and August (1952): 406, 57, and 112). Since these efforts were unproductive, a letter was sent to Mr. Robert A. Lovett, Secretary of De-

fense, on June 10, 1952, inquiring the reason for this delay in response from the Department of Defense. On June 25, about four months after the bills were introduced, a reply was received from Assistant Secretary of Defense Charles A. Coolidge stating that:

> Final policy concurrences on the report to which you made reference were received in this office yesterday, and the draft report is now being prepared in final form for submittal to the Bureau of the Budget for its advice as to its relationship to the program of the President.

We, of course, do not know the reason for this delay. It did eliminate possible action on these bills during the 82nd Congress, which adjourned July 7, 1952.

Prospects for Enactment in 1953

The Surgeon General of the Department of the Army has now recommended that this amendment to the Officer Personnel Act be enacted in 1953. This recommendation has been referred to the Chief of Staff of the Army and the Department of Defense. If they concur in this recommendation the chances for enactment in the 83rd Congress will be materially brighter.

Several members of Congress, some on the Armed Services Committees, indicated a willingness to support this legislation. A favorable reaction from the Armed Services Committees and Congress in general, coupled with an endorsement from the Department of Defense, would indicate a good possibility of removing this inequity to the Veterinary Corps in 1953.

Bonus Pay Discrimination

The legislation providing bonus pay for medical and dental officers was also of direct interest to veterinarians, and particularly to veterinarians with commissions in the Veterinary Corps. The $100 a month additional pay received by physicians and dentists in the Armed Services and the U. S. Public Health Services was also enacted in 1947 and is part of the Career Compensation Act.

Basis for Bonus Pay

As has been explained in several issues of the JOURNAL (Oct., 1950: 435; Feb., 1951: 124), this additional pay for medical and dental officers was "sold" on the basis of a need for an inducement for recruiting and retaining career officers. Since the Veterinary Corps was over-strength at the time no necessity for such an inducement to veterinary officers could be shown.

Even though this bonus to medical and dental officers was originally proposed as an incentive for recruiting officers for military careers, the justification of it by the Medical Corps has now been shifted to a compensatory or "equalizing" basis. The reasoning is that graduates of a four-year course leading to a baccalaureate degree have met the educational requirements for a second lieutenant's commission, while the dental or medical student must finance up to eight years of college education. The graduates of four-year courses can begin to draw full pay and allowances and may do so for four years before the physician or dentist is eligible for a commission as a first lieutenant. The U. S. Army Medical Service *Personnel Newsletter* of June 9, 1952, states: "Thirty years after they started their respective careers the other categories of officers are some $40,000 ahead of the medical or dental officer."

AVMA Actions

The Association attempted to have veterinary officers included in this special pay provision. Senate bill 2738, introduced by Senator Hunt, would have added veterinarians, if enacted, and the Association supported this bill as explained above. At the Senate hearings on S. 3019 an effort was made to have the Veterinary Corps added to the special pay groups (*see* JOURNAL, June (1952): 406, and Aug. (1952): 112). A request to be heard by the House Armed Services Committee was denied. The speedy enactment of S. 3019 extended the provisions for this additional pay for physicians and dentists in the Services until Sept. 1, 1953, which is also the expiration date of P. L. 779 (doctors' draft law).

As pointed out by Dr. W. R. Krill at the Senate Armed Services Committee hearing on S. 3019 (*see* JOURNAL, June (1952): 406) and in letters to Committee members, these arguments for compensatory pay are as applicable to Veterinary as to Medical and Dental Corps officers. The fear of jeopardizing the extension of the additional pay for medical and dental officers by adding another corps has been given by committee members as the reason why veterinary officers were not added. There apparently was a great interest and almost

unanimous approval of this legislation by members of the Armed Services Committees. It also had the endorsement of the Department of Defense.

CONCLUSION

The unsuccessful effort to have these bills pertaining to the Veterinary Corps enacted will be cited by some members as examples of the AVMA "dropping the ball." If these members could visualize how extremely difficult it is to get a large government department, such as the Department of Defense, and the Congress to display interest in and support legislation affecting relatively few people, they would better understand the problem. The few hundred officers in the Army and Air Force Veterinary Corps are a small proportion of the Armed Services, even of the commissioned personnel.

The introduction of this legislation and the efforts to have veterinarians included in the special pay have served a valuable purpose. There are now a number of congressmen who are familiar with the facts relative to this legislation. The recommendation from the Army's Surgeon General indicates a favorable interest on the part of the Army. With this beginning and with the experience gained in the last Congress, it is going to be much less difficult to secure enactment of the desired legislation.

The AVMA is specifically on record through resolutions adopted by the Executive Board and the House of Representatives to secure enactment of such legislation. The Association's efforts will be amplified in the 83rd Congress to that end.

Vesicular Stomatitis in Mexican Cattle

The Mexico-United States Commission for the eradication of foot-and-mouth disease in Mexico announced that the Palo Alto laboratory had processed 100 samples of tissue material sent in by the Commission's inspectors during June. Laboratory and biological tests showed that none were *aftosa*. While 27 were negative, 73 were diagnosed as vesicular stomatitis (39 of the New Jersey type and 34 of the Indiana type). Vesicular stomatitis occurs naturally in horses, mules, and cattle. In cattle it can be differentiated from foot-and-mouth disease only by laboratory tests.

Foot-and-Mouth Disease Research Laboratory

The Congress has appropriated funds for the construction of a foot-and-mouth disease research laboratory which will probably be located on Plum Island in Long Island Sound. This is a government-owned island and meets all the requirements, including that it be completely surrounded by deep navigable water. The construction and completion of the laboratory is expected to require about two years.—*U.S.D.A.*

Albino Kangaroo from Australia.—A 14-month-old albino kangaroo, the only one in captivity, is now in the National Zoölogical Park in Washington. Found in its mother's pouch after she had been shot, it was presented to the United States by Australia as a symbol of good will. The eyes of an albino kangaroo are so weak that it may hurt itself by jumping against obstacles.—*Science News Letter, June 14, 1952.*

Metabolic Relationship Between a Vitamin and an Insecticide

A close relationship in the complex chemical formula of the B vitamin, meso-inositol, and the benzene hexachloride extract, lindane, has been reported. To determine metabolic relationship, an experiment was conducted on German cockroaches. The nymphs were fed on various concentrations of the vitamin for thirty-eight days. Ten, fed on each concentration, were then placed in one Petri dish containing the same basic food, plus the insecticide. When the results were plotted, it was evident that up to a certain point, the more of the vitamin the nymphs had consumed the longer they resisted the poison. The smallest concentration of the vitamin protected the nymphs for three days, and the optimum concentration protected them for twenty days. However, all of the nymphs eventually succumbed.—*Science, April 11, 1952.*

Dr. J. F. Witter, of the University of Maine, warns that if drinking water for fowl is too strongly medicated the resulting water starvation may do more damage than the disease for which the water was medicated.

Vesicular Exanthema Declared A National Emergency

Vesicular exanthema, the *aftosa*-like disease which affects only swine, has in the past few weeks spread from coast to coast with 16 states reporting the disease by July 31. In 11 of these states, only one or two premises were infected and the disease seemed to be contained. In two of these states it apparently had been eradicated. Nebraska, Missouri, Kansas, and New Jersey each reported the disease in six to eight counties, respectively, and the entire state of California is under quarantine. So far as is known, this disease has never been diagnosed in a foreign country and never outside of California until June, 1952. It first appeared in garbage-fed swine in California on April 23, 1932, and was diagnosed as foot-and-mouth disease. In an attempt to eradicate it 18,000 swine on 17 premises were slaughtered and buried. The disease recurred in 1933 and again eradication by slaughter was attempted. By 1934, when the disease again reappeared, it was apparent that it was not foot-and-mouth disease. The virus was then identified as a new entity by Dr. J. Traum and the disease was given the name of vesicular exanthema (pronounced ex-an-*thee*-ma). No attempts to eradicate it by slaughter methods have since been made.

Vesicular exanthema has been considered as primarily a disease of garbage-fed swine. It is highly contagious and has an incubation period of only one to five days. Man, ruminants, and carnivora are said to be wholly resistant to this disease but horses show a slight susceptibility on artificial inoculation.

The present outbreak apparently started in early June in swine near Cheyenne, Wyo., presumably from virus-infested garbage taken from east-bound transcontinental trains. On June 18, it was diagnosed at Grand Island, Neb., in hogs recently received from Cheyenne. Hogs from the Grand Island point had been shipped to the Omaha market that same day and reshipped to various points, including one in New Jersey. These shipments were immediately traced and quarantined at their various destinations. In New Jersey, in spite of the quarantine immediately placed on that shipment, the disease has spread in a month to over 20 farms in eight counties of a garbage-feeding area. Although the Grand Island hogs showed no symptoms when they passed through the Omaha yards, they must have been disseminating virus since hogs following them through the same lanes and pens later developed the disease.

Several other midwestern markets have also received infected hogs. When the disease first was discovered to have been in any of these yards, an embargo was immediately placed on that market until all the noninfected pigs on hand were butchered, the infected swine strictly quarantined, and the entire yards thoroughly disinfected. The market was then reopened but only for hogs coming for immediate slaughter. However, as soon as the serious character of the epizoötic was realized more drastic measures were instituted. Now all the meat of exposed swine and of swine from a quarantined area is heated sufficiently to destroy any lurking virus before it is released for food. This can be done by boning and canning all this meat, then heating it to at least 143 F. momentarily.

The reason for requiring this sterilization of the meat is evident when two significant facts are considered: first—as has been proved with some other virus diseases—an infected animal may disseminate the virus for hours or even days before any symptoms appear.

Second—viruses can live for long periods in refrigerated fresh meat, as was well illustrated by the frequent outbreaks of hog cholera in far flung countries where fresh pork scraps from U. S. troop messes were fed to susceptible pigs during World War II.

Since the mortality in this disease is very low, most of the affected swine have been strictly quarantined and when they are completely recovered may be slaughtered for food. Some of these affected swine are at hog cholera antiserum-producing plants, which means that these plants are completely closed by quarantine and will be out of production for some time. Several unaffected serum plants have also closed voluntarily and in some cases marketed all of their hogs. Thus, well over half of such plants, including most of the larger serum producers, are indefinitely out of production. It is possible that the supplies of virus, vaccines, and serums of swine origin will eventually be exhausted and that the lapinized vaccines may be the only ones available for immunizing swine against hog cholera. Fortunately, they are said to establish immunity to hog cholera in about four to seven days but in case of a threatened hog cholera epizoötic supplies of these vaccines might also be exhausted.

Several emergency meetings of federal and state veterinarians, sanitary, stockyard and swine association officials, and hog cholera antiserum and virus producers have been held, the last being in Washington, D. C., on July 30. After that meeting, the epizoötic of vesicular exanthema was recognized as a threat to the livestock industry and a national emergency was declared. This official ruling made funds available to the Bureau of Animal Industry to indemnify swine owners and producers for losses suffered in the control and eradication of the disease. Recovered or exposed hogs may be appraised, slaughtered, and processed but animals showing symptoms may be killed and burned or buried on the premises. The federal and state governments will each pay half the indemnity.

An order prohibiting the movement across state lines of any animals from infected areas, except to immediate slaughter, had been signed by the Secretary of Agriculture on July 24. Intrastate regulations, however, may vary with the conditions in each state.

As Dr. B. T. Simms aptly stated at a Chicago meeting on July 25, "The eradication of any

(Continued on p. 170)

The Work of the Federal Meat Inspection Service

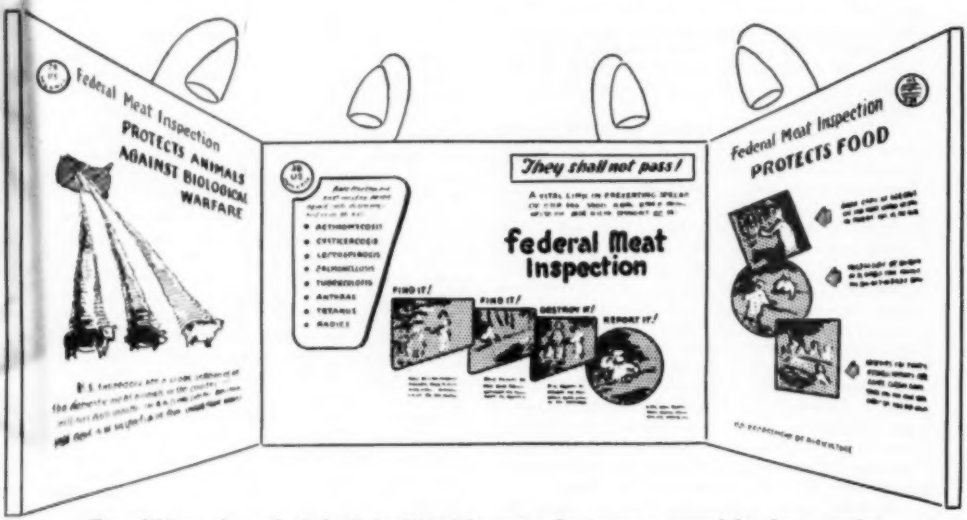
The American Veterinary Medical Association is proud to recognize the work of the Federal Meat Inspection Service through its exhibit displayed at the American Medical Association convention in Chicago in June. Illustrated with color photographs and uniquely lighted, the big three-panel exhibit tells of the part the government agency plays in assuring a clean, sound, wholesome meat supply and in preventing the spread of diseases of animals that are transmissible to man. The theme, "They Shall Not Pass," refers to those diseases of course, and it succinctly tells the story of food protection, as well as human security, resulting from the skill and care exercised by the Federal Meat Inspection Service throughout the United States.

Through antemortem and postmortem inspection, such diseases as actinomycosis, cysticercosis, leptospirosis, salmonellosis, tuberculosis, and tetanus are detected in animals offered for slaughter. Affected carcasses are disposed of so that they cannot enter food channels.

When diseases are discovered which require action to be taken with respect to other exposed animals, the meat inspector reports his findings to the disease control officials in the area from which the animal originated, so that prompt action may be taken to stamp out the disease at the source.

Other factors of the inspection service are told in the exhibit, such as the cleanliness insisted upon by its inspectors, equipment which is readily cleaned, inspections made to prevent adulteration, etc. The part played by the Federal Meat Inspection Service in protecting against biological warfare is explained.

The exhibit was designed primarily for the A.M.A. convention, and was shown later at the American Veterinary Medical Association convention in Atlantic City. It will then be available for showing to other groups and associations interested in the meat inspection program.



This exhibit on the work of the Federal Meat Inspection Service was prepared for the convention of the American Medical Association, Chicago, June 9-13, 1952. It was designed and constructed by the Meat Inspection Division, U. S. Department of Agriculture, Washington, D. C.

(Continued from p. 169)

disease depends on the state of mind. We have eradicated foot-and-mouth disease and nearly eradicated tuberculosis in cattle whereas the British tolerate these diseases. On the other hand, the British have eradicated hog cholera and rabies whereas we apparently are satisfied to live with them."

By August 8, quarantine restrictions had been removed from four of the 16 states and from several counties in seven other states. At the same time, quarantines were extended in small areas in two states.

SURGERY & OBSTETRICS

AND PROBLEMS OF BREEDING

A Lateral Canine Hermaphrodite

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After reviewing recent literature, it becomes evident that hermaphroditism in domestic animals is a rarity. Although thousands of genital organs are seen daily on the slaughter floor and on the surgery table, very few anomalies are reported. The true hermaphrodite, in which the somatic characters and generative cells of both sexes are present,[1] is even more uncommon.

Of the 3 dogs seen by Phillips *et al.*,[2] 2 were pseudohermaphrodites. That is, they both had external genitalia of a female with an enlarged clitoris containing an os penis, but had two testicles. Ludins[3] reported a Collie-Shepherd cross with a vulva and a testicle in half a scrotum. The clitoris was enlarged and contained an os penis and a definite bulbus glandis. Even though somatic characters of both sexes were observed, this can not be called a true hermaphrodite, since the presence of an ovary was not determined.

In their exhaustive article, Phillips *et al.*[2] classify true hermaphrodites as:

1) Bilateral—in which a testicle-ovary is present on both sides.

2) Unilateral—in which a testicle-ovary is present on one side and a testicle or ovary on the other side.

3) Lateral—in which a testicle is present on one side and an ovary on the other.

Unilateral hermaphrodites were reported by Hernaman-Johnson[4] and Phillips *et al.* Both dogs had the external genitalia of a female, an enlarged clitoris with an os penis, a uterus, an ovary-testicle, and a testicle.

Case Report

The patient, a 2-month-old black Cocker Spaniel, was first seen in October, 1950, when a small umbilical hernia was noticed. Not until the fourth visit for distemper inoculations was an enlarged clitoris observed. The owner noticed a rapid growth of the clitoris during the ensuing two months and requested surgery. He was advised to postpone surgery until the gonads were mature and could be removed as well. In the latter part of June, 1951, the owner noticed male dogs congregating about his house, although at no time was any vaginal discharge present in the animal. Estrus without discharge continued up to July 16, 1951, when surgery was performed. The two gonads, the uterine horns, and part of the uterine body were removed and the umbilical hernia reduced. The dog made an uneventful recovery. At no time did the patient show viciousness but was always in poor flesh, even though the appetite was good and parasites absent.

Pathology Report.—The organs removed surgically were examined by Major C. A. Gleiser, V.C., at the Armed Forces Institute of Pathology. The report follows:

Gross.—The specimen consists of the gonads, the horns of the uterus, and a small section of

Fig. 1—A lateral canine hermaphrodite, posterior view, showing enlarged clitoris.

Drs. Lawrence and Meisels are practitioners in New York, N. Y.

the body of the uterus. One gonad is larger than the other and the horns appear to be thickened.

Microscopic.—Left Gonad.—Sections of the left gonad are those of a completely atrophic im-

—Armed Forces Institute of Pathology

Fig. 2—Cross section of ovary (x 50), corpus luteum, and follicles without ova.

mature testis. The tubules are small and contain no spermatogonia or spermatocytes. There is no evidence of spermatogenesis. Practically each tubule is surrounded by connective tissue.

Right Gonad.—Sections of the right gonad are comprised of ovarian tissue. Practically the entire section is comprised of corpora lutea. No oögenesis is recognized. The few follicles present contained no ova.

Uterus.—A section of the horn of the uterus reveals a hyperplasia of the endometrium. There is a marked increase in the number of glands in the endometrium. There is also a minimal amount of hemorrhage in the endometrium. Sections of the body of the uterus reveal the same endometrial hyperplasia. There is a marked increase in the endometrial glands, especially at the bottom of the endometrium.

Diagnosis.—The diagnosis was hermaphroditism, true, lateral, canine; and hyperplasia, endometrium, uterine, canine.

It will be noted that in every case of her-

—Armed Forces Institute of Pathology

Fig. 3—Cross section of "ovary" (x 96), atrophic testis.

maphroditism reported, true or pseudo, an enlarged clitoris with an os penis was present in conjunction with the external genitalia of a female. This should be borne in mind when examining a newly acquired dog.

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[3]Ludins, G. H.: Hermaphrodism in a Dog. J.A.V.M.A., *101*, (1942): 131.

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Treatment of Granulating Wounds in Horses by Means of Skin Grafting

JOHN H. WOOLSEY, Jr., D.V.M., and MYRON H. SCHAFFER, D.V.M.

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THE FREQUENT slow rate of healing and the tendency to excessive granulation of wounds of the lower extremities of horses under all types of conventional care prompted an investigation into other methods of treatment which might overcome these difficulties. This paper describes a method of "seed" grafting of these areas of granulation patterned after methods used in human surgery.

Although autotransplantation of skin grafts in horses was described by Nilsson[1] in 1944, the authors were unaware of this work until they had independently adopted their own technique and had initiated the grafting experiments, at which time the Swedish paper was called to our attention.[2] The procedures adopted by us were similar to those described by Nilsson, both techniques being essentially the same as those outlined by Reverdin, the French surgeon who was the first to report successful skin grafting in man.

PROCEDURE

Preparation of the wound to be treated consists of trimming away excessive granulation tissue with a razor to the level of, or just below, the skin edges, and dressing the area with normal saline or white lotion pressure packs until a new spongy layer of granulation tissue appears which is suitable for embedding the grafts. We have found, in agreement with Nilsson, that this usually occurs within ten to fourteen days following excision of the exuberant granulation tissue.

Obtaining the epithelium for the graft requires only mild restraint, a nose twitch usually being sufficient. A circular area of skin 2 in. in diameter just lateral to the anus is washed, shaved, injected with 10 cc. of 2 per cent procaine solution, and wiped with sterile saline solution (fig. 1). The bleb produced by the infiltration of procaine facilitates removal of a square inch of epidermis with a razor (fig. 2). Ideally, the cut should be made through the papillary layer of the corium so that a few centers of the stratum germinativum are left to epithelize the denuded area (fig. 3). The epithelial graft is then placed in a clean pan containing sterile saline solution.

Fig. 1—Injecting 2 per cent procaine solution into donor site.

The preparation is completed by cutting the graft with scissors into small pieces approximately 2 to 3 mm. in size (fig. 4).

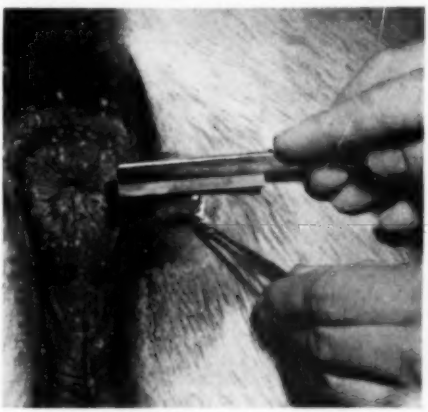

Fig. 2—Cutting graft with razor.

From the School of Veterinary Medicine, University of California, Davis.

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[2]Kendrick, J. W.: Personal communication.

The technique of implanting the grafts into the granulation tissue of the wound is as follows: The surgeon removes the individual grafts one at a time from the saline bath with a sharp-pointed thumb forceps. Each graft is placed momentarily on the tip of the forefinger and regrasped firmly enough with the forceps to assure that it will not be prematurely released during insertion. The forceps holding the epithelial "seed" is then thrust into the granulation tissue of the wound to a depth of 3 to 5 mm., the tension released, and the forceps withdrawn, leaving the piece of epithelium within the granulation tissue (fig. 5). The grafting proceeds from the lower portion of the wound upward, so that the slight hemorrhage that occurs does not obscure the ungrafted area. Grafts are placed at intervals of about 1 cm. until the entire granulating area is covered. Some grafts wash out after implantation as a result of hemorrhage, but enough remain in place to initiate the desired epithelization of the wound surface.

The after-care consists of maintaining pressure packs over the wound in order to retard growth of granulation tissue. This is no less essential following grafting than in conventional treatment without grafting and is maintained until epithelization is nearly complete.

DISCUSSION

The procedure is relatively simple and can be accomplished on most horses by two men, one holding the twitch and the other doing the grafting. No special effort toward asepsis appears to be necessary. Treatment of the donor area with strong antiseptics may kill the epidermal cells and thus defeat the purpose of the procedure. Cleanliness is of paramount importance, however, and thorough washing of the donor area and the hands of the operator, and the use of clean equipment were practiced throughout.

It is impossible to graft the wound immediately following removal of the exces-

Fig. 3—Histological section of perineal skin. Lower line denotes papillary area of corium.

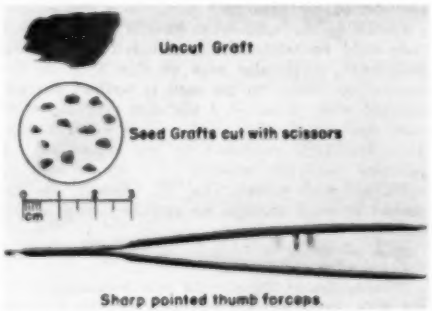

Fig. 4—Materials used in skin grafting.

Fig. 5—Inserting graft into granulation tissue. Grafts are visible from previous grafting.

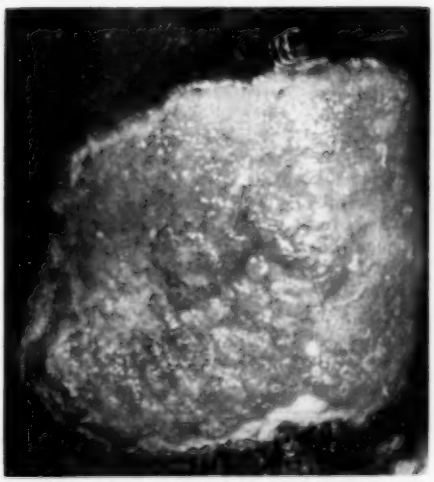

Fig. 6A—Wound on pastern thirteen days after grafting. Grafts are just becoming visible.

Fig. 6B—The same wound twenty-three days following grafting. Notice increased size of grafts and pigmentation starting in center of grafts.

sive granulation due to the density of the collagenous tissue usually found below the surface of exuberant granulations. The waiting period of ten to fourteen days after trimming the wound is, therefore, essential to the development of a young granulation tissue having a favorable blood supply. About 80 to 90 per cent of the grafts are embedded without difficulty and of these about 20 to 25 per cent live or "take." Though burial of the grafts delays their appearance on the surface, it also insures the nonmotility essential to successful invasion by the capillaries of the surrounding granulation tissue. We suspect, however, that a number of the grafts are squeezed to the surface due to movement of the limb, and eventually die. Grafts applied directly to the surface of the granulation tissue are dislodged by friction between the bandage and the wound surface, with resulting necrosis.

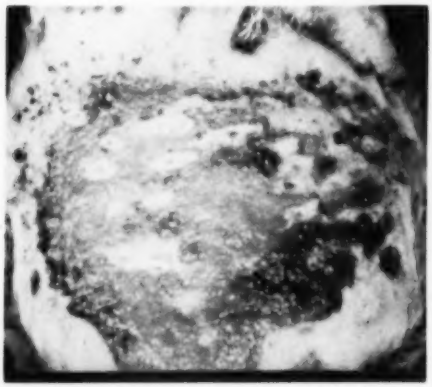

Fig. 7—Wound on anterior surface of hock forty-two days after grafting.

"Takes" are usually observed within two to four weeks after grafting, but in one case they did not appear for seven weeks. They are first observed as pale, bluish or pink spots which spread slowly over the surface of the granulation tissue (fig. 6A) eventually coalescing with each other and joining the skin edges which are slowly moving in. There appears to be stimulation of epithelial growth at the edges of the wound following grafting, but this has also been observed in wounds receiving proper care after periods of neglect.

A close clinical evaluation of the rate of wound closure was not attempted. Most of the cases we have encountered, however, were sent to our clinic because of failure to respond to routine wound treatment. To date we have treated 7 horses using this method and have obtained satisfactory results in 5. The authors feel that the limited success of this procedure merits further clinical trials on large granulating wounds in the equine and other species.

Fig. 8—Histological section of graft growing in granulation tissue.

SUMMARY

A successful method of seed grafting in the horse has been described. Satisfactory grafts were obtained in 5 of 7 cases of excessive granulation. Further clinical trials are merited.

The prolonged use of antibiotic therapy may result not only in the development of resistant strains of bacteria but also in an increase of fungus infections.—*H. C. Smith, D.V.M., Sioux City, Iowa.*

Progressive Retinal Atrophy in a Dog

GERRY B. SCHNELLE, V.M.D.

Boston, Massachusetts

This will report a case of progressive retinal atrophy, presumed to be hereditary, in a yellow Labrador Retriever, originally imported from England, and which has been used extensively at stud in the United States.

This disease was first reported by Magnusson (1911)[1] in Sweden in a Gordon Setter which had been imported from England. It was described in the Irish Setter in a considerable detail by Hodgman, Perry, Rasbridge, and Steel (1949).[2] A resumé of their finding follows:

The earliest signs of the lesions can be detected, by breeders experienced with the disease, when the animals are 6 to 8 weeks old. At that time, affected pups show increased reflectivity from the tapetum which is green instead of yellow-orange-green. This is more easily seen in dim light, and night blindness may be observed by appropriate experiments. Loss of vision is progressive so that eventually the animal becomes blind in the daytime as well. It is believed that distemper or other infections hasten the development of the blindness. These older animals first impress the owner or veterinarian with the dilated pupil and the green reflection, especially indoors or in dim light. As the visual defect progresses, the pupillary light reflex becomes sluggish. Vision in brighter illumination is not impaired until advanced stages of the disease, which may occur several months to several years after the defective night vision is well marked. There is no increase of intraocular pressure, the cornea, anterior chamber and iris are normal, but cataracts do develop in a large proportion of affected animals. The extension of these cataracts is slow.

Ophthalmoscopic Examination.—In addition to the plainly visible dilated pupil and green reflection, the retina viewed through the ophthalmoscope is much greener than normal. The texture of the retina is changed gradually, losing its granular beading. The changes in the blood vessels are marked, the smaller ones becoming fine and threadlike and thus sharply different from the normal. The larger blood vessels leading to and from the disc are still present but reduced in size, but the smaller ones gradually become invisible.

Incidence.—The disease is widespread among Irish Setters in Great Britain, and is known to have occurred in the United States, Sweden, Australia, France, Holland, and Ireland in the progeny of the dogs imported from the United Kingdom. Formston[3] reports its occurrence in the Labrador Retriever.

The Genetics of the Disease.—Hodgman *et al.*[2] have studied the mode of inheritance from the pedigrees of some 200 affected Irish Setters. They state:

The mode of inheritance is almost certainly a simple Mendelian autosomal recessive factor. Let "R" represent the dominant factor for retinal health and "r" its recessive counterpart associated with retinal atrophy. Then three genetic types of animal will occur, the homozygous dominant, "RR," the heterozygous, "Rr," and the homozygous recessive, "rr,"; the last type is the only one to exhibit the disease. The two types "RR" and "Rr" are unaffected in their powers of vision, but the heterozygous form carries the retinal atrophy factor, "r," and may be termed a "carrier." The "carrier" animal mated with another "carrier" or with an affected animal will produce a proportion of affected animals; mated to the dominant "RR" it will produce no affected progeny, but the chances are that half of them will still be "carriers." Most cases of the disease occur through the mating of two "carriers."

To eradicate the defect from the breed, matings should only be made from animals with the genetic constitution, "RR," *i.e.*, the off-spring of homozygous "RR" parents or only those progeny of two heterozygous "Rr" "carriers," which have been shown to be genotypically "RR." The progeny of matings of the heterozygous "carrier" and recessive "case" or of two recessive "cases" should not be used for breeding.

The Irish Setter Association of England has taken active steps to eradicate the disease by requiring its members not to use, for breeding, actively afflicted Setters and those known to be carriers.

The dog seen in Boston was a yellow Labrador Retriever imported from England in 1949. One of his offspring is thought to have progressive retinal atrophy. This dog was known to have been "blind" at the age of 3. He has markedly dilated pupils and striking green reflectivity which could easily be seen at casual glance in normal daylight. Close examination of the eye, especially with oblique illumination, showed a greyish cast in the center of the pupil which proved to be a posterior cortical cataract. On ophthalmoscopic examination, the retina was strikingly pale green without granules or pigment. The retinal vessels

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were threadlike. Even on the optic disc the larger vessels were small and the usual number of smaller vessels present in a normal disc could not be seen at all. The optic disc itself was yellow-pink and slightly blurred in outline. The entire retina gave the appearance of being slightly hazy.

The eyes were examined by Dr. Trygve Gundersen,* who expressed the opinion that the lesion was similar to an hereditary blindness seen in human beings and known as retinitis pigmentosa, or pigmentary degeneration of the retina. Its difference from the disease in man was principally in that pigmentation was not seen in the dog. In view of the history, the findings on examination, and of the known existence of a similar blindness in this dog, it is believed that the lesion is progressive retinal atrophy, hereditary in nature, as has been previously reported in England. The significance of the occurrence of this presumably hereditary lesion in a dog which has been used extensively at stud in the United States is obvious.

SUMMARY

1) Hereditary, progressive retinal atrophy in the Irish and Gordon Setters has been reviewed.

2) A case of retinal atrophy in a 5-year-old yellow Labrador Retriever imported from England, that appears identical to that described as hereditary in the Irish Setter, has been described.

3) This dog has been used extensively at stud in the United States.

4) Attention is called to the similarity of progressive retinal atrophy in dogs to retinitis pigmentosa in human beings—perhaps more especially to the special type called retinitis pigmentosa sine pigmento.

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*Dr. Gundersen (M.D.) is assistant clinical professor of ophthalmology, Harvard Medical School, Boston.

Sequelae to a Lacerated Wound

D. D. DELAHANTY, D.V.M., M.S.

Fort Collins, Colorado

A 4-year-old Quarter Horse (mare) was admitted to the Department of Surgery at Colorado A. & M. Veterinary Hospital with a history of a wire cut, which had occurred within the previous twenty-four hours, on the volar aspect of the left forelimb distal to the fetlock. It was evident that there had been considerable hemorrhage. When walking, the mare bore little weight on the limb and the toe had a tendency to turn upward.

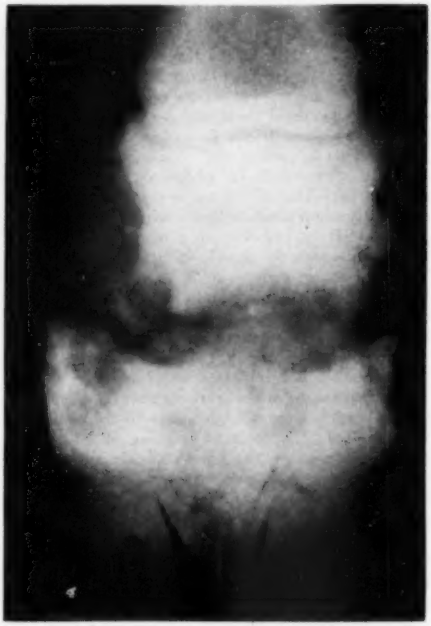

Fig. 1—Anterior-posterior projection of the coffin joint. Note destruction of the articulations of the affected joint, displacement of the bones, excessive periosteal activity, and the presence of gas between the sensitive and insensitive frog.

Examination of the wound revealed probable separation of the superficial flexor tendon, partial separation of the deep

From the Department of Surgery, Colorado A. & M. College, Fort Collins. Dr. Delahanty is now on the staff of the Department of Surgery, New York State Veterinary College, Ithaca.

flexor, severance of both volar vessels and nerves, and extensive mutilation of the surrounding soft tissues. The prognosis was unfavorable but the owner desired to salvage the mare since she was in foal. After three weeks of unsuccessful treatment, the

Fig. 2—Lateral projection of the coffin joint. Note the excessive periosteal activity on the anterior aspect of the second phalanx, destruction of the articular surfaces, and increased joint space.

owner decided on euthanasia but the mare was maintained to observe the progress of the case. On the sixty-eighth day, after trying all the usually applied topical and parenteral drugs, the mare was destroyed because the radiographic films revealed a suppurative arthritis of the coffin joint (fig. 1 and 2).

Prior to radiological study of the part, several unfavorable changes had taken place. Suppuration occurred in the digital sheath and spontaneously erupted bilaterally above the fetlock. The mare had to be restrained from chewing the wound by the use of a pole and surcingle. Recumbency became the rule and the mare developed decubital ulcers. The entire posterior aspect of the heels became insensitive and separation occurred at the heels. At the time the mare was euthanized, the exuberant granulations and the abscess wounds in the digital sheath had nearly healed.

CONCLUSION

Prior to undertaking prolonged treatment in severe lacerated wounds of the extremities, consideration must be given to vascular and neurogenic devitalization of the part and susceptibility to infection. Early in the condition, separation of the insensitive from the sensitive structures of the foot can be detected radiologically and is often indicative of an unfavorable outcome.

Pregnancies resulting from breeding mares during December through May, on the average were 10.4 days longer than those resulting from breedings during June through November.—*J. Anim. Sci., Nov., 1951.*

A simple operation on the end of the teat of a hard-to-milk goat will make her easier to milk. It should be done only by a veterinarian to avoid infection or a permanent leak.—*Dairy Goat J., April, 1952.*

Sheep practice and goat practice can be profitable but they are entirely different. The owners all seem to regard their goats as pets and are usually most exacting. Pregnancy disease in sheep occurs in farm flocks where they are too generously fed and also on the range on near starvation rations. The starved ewes seem to respond more rapidly to calcium gluconate and dextrose treatment than do the fat ewes. Thiamine is also indicated. Cesarean section or causing abortion in the ewe by giving 25 to 30 mg. of diethylstilbestrol in a slow absorption base seems to give the best results.—*V. D. Stauffer, D.V.M., Colorado.*

Urinary calculi are a major problem in mink raising.—*G. R. Hartsough, D.V.M., Wisconsin.*

CLINICAL DATA

Clinical Notes

Notes from Postgraduate Conference for Veterinarians, University of Wisconsin, July 22-23, 1952

In calf pneumonia, sulfonamides may influence the secondary invader, bacteria, but probably not the primary virus and if used too long they may cause nephritis.—*T. Moll, D.V.M., University of Wisconsin.*

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In Vibrio abortion in ewes, the *Vibrio fetus* can be isolated from the fetus and from the ewe up to three weeks after abortion.—*D. K. Sorenson, D.V.M., University of Wisconsin.*

• • •

The broad tapeworm of sheep, *Monesia expansa*, does kill lambs in Wisconsin and in Kentucky.—*A. C. Todd, Ph.D., University of Wisconsin.*

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The virus of Newcastle disease has been recovered from the urine and from the blood of men who became infected.—*R. P. Hanson, Ph.D., University of Wisconsin.*

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Insect vectors are suspected of transmitting vesicular stomatitis of cattle. It occurs between July and November and usually near wooded areas.—*T. L. Chow, Ph.D., University of Wisconsin.*

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Mink may show symptoms of distemper from the eleventh to the thirty-seventh day after artificial inoculation, but they may disseminate the virus for six days before symptoms appear and for about two weeks after apparent recovery. The virus can not be recovered from the urine or feces but it is recoverable from nasal discharge, the skin scurf, or from the gloves of the handler.—*J. R. Gorham, D.V.M., Washington State College.*

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We need more veterinary research to find out what is the effect on animal health and disease resistance of hybrid breeding and forced draft feeding.—*Paul C. Johnson, Editor, Prairie Farmer.*

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An aplastic anemia, resembling that produced in trichloroethylene soybean meal poisoning, occurs in bracken fern poisoning and thousands of acres in the lake regions of Minnesota and Wisconsin are infested with bracken ferns.—*W. R. Pritchard, D.V.M., Minnesota.*

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The thiaminase enzyme in uncooked smelt can destroy the vitamin B_1 in other feeds and thus cause fatal deficiencies in mink.—*G. R. Hartsough, D.V.M., Wisconsin.*

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In vaccinating for Newcastle disease, it is better to use a killed virus of doubtful efficiency than to introduce the disease with a supposedly safe, living virus.—*E. B. Ingmand, D.V.M., Iowa.*

• • •

Pregnancy disease (ketosis) can occur in either thin or fat ewes when for any reason they go off feed. Exercise stimulates their appetite and helps burn up the ketones.—*J. Sampson, D.V.M., University of Illinois.*

• • •

Cortisone seems to benefit many cases of arthritis in old dogs. It also seems to hasten the healing of corneal ulcers and is beneficial in some cases of canine bronchial asthma.—*A. G. Meisner, D.V.M., Illinois.*

• • •

In the artificial insemination of cows, thought to be nonpregnant, the placing of semen at midcervix seems not to be harmful whereas introducing it into the uterus sometimes causes abortion or the death and resorption of the fetus.—*L. E. Boley, D.V.M., University of Illinois.*

Streptomycin in Bovine Actinomycosis

Two Herefords with discharging mandibular lesions were given 4 Gm. of streptomycin intramuscularly three times daily for four days, a total of 48 Gm. each. They healed promptly with no recurrence in two years. The deformity remains.

Two Holstein-Friesians with recurrent actinobacillosis that had been given sodium iodide and local treatment several times in three years were given 5 Gm. of streptomycin twice daily for five days—a total of 50 Gm. each; they have had no recurrence in two years.—*V. D. Stauffer, D.V.M., Colorado.*

A 4-month-old Jersey calf with a typical case of advanced blackleg had a swelling in one hip and in the sublingual region. It was treated with penicillin only—2,200,000 units in aqueous solution was injected into different parts of the lesions. About half this amount of penicillin was repeated in similar treatments daily for four days, after which the calf made a complete recovery without any sloughing of the diseased tissue.—*Vet. Rec., April 19, 1952.*

The Presence of Demodex Canis in Lymphatic Glands of Dogs

HASSAN EL-GINDY B.V.Sc., M.V.Sc.

Cairo, Egypt

THE PRESENCE and significance of the parasite *Demodex canis* in the lymphatic glands of dogs suffering from follicular mange was first recorded by Canepa and de Grana[1] who noted an increase in size of the superficial lymph nodes, particularly in the cases of a pustular type. They recorded the isolation of the parasite from the submaxillary, retropharyngeal, prescapular, inguinal, popliteal, mediastinal, and mesenteric glands. They suggested that when the parasite seemed to disappear temporarily from the lesions, the lymph glands may have constituted a reservoir of infection from which the acurus mite might subsequently reach the skin again.

Unsworth[2] demonstrated *D. canis* from lymph glands of dogs infested with demodectic (follicular) mange. The entire lymph gland mass was dissolved in 10 per cent caustic potash solution. He searched for the parasites in the deposit after it had been centrifuged.

The potential importance of these observations led the writer to examine the lymph glands of dogs affected with demodectic mange.

Materials and Methods.—In order to avoid contamination of the glands from the skin, a separate set of instruments was used for each stage in the operation. The skin incisions were held open with forceps so that the final dissection could be made without touching the outer surface.

The writer used three methods to search for the parasites in the lymph glands: (1) emulsifying the lymph glands with normal saline solution; (2) dissolving the lymph glands in sodium hydroxide solutions; and (3) sectioning the lymph glands prepared either by the paraffin method and staining with hematoxylin and eosin or by the freezing microtome.

The lymph glands of the animals affected with *D. canis*, which either died from a condition other than this mange or which were destroyed by chloroform, were examined for the presence of the mites.

Method 1.—Submaxillary, superficial inguinal, axillary, external iliac, and internal iliac lymph glands were removed from 2 diseased animals immediately after death. Each gland was divided into two parts, "A" and "B". "A" was emulsified with normal saline solution and examined microscopically for mites; no parasites were found. "B" was sectioned by the paraffin method, stained with hematoxylin-eosin, and examined microscopically; no parasites were found.

Method 2.—In the first experiment, 5 animals infected with demodectic mange were destroyed with chloroform. Submaxillary, axillary, internal iliac, superficial inguinal, and popliteal lymph glands were removed and each was divided into three parts, "A," "B," and "C." "A" was dissolved in 10 per cent sodium hydroxide solution and boiled until it disintegrated. It was then centrifuged, and the deposit was examined microscopically for the presence of mites. None was found. "B" was dissolved in 20 per cent sodium hydroxide solution and boiled until it disintegrated. It was then centrifuged and the deposit examined for the presence of mites. None

Fig. 1—Demodex canis mite embedded in the lymphoid tissue of the axillary lymph gland of a dog.

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The author thanks Dr. El Sayed Fouad Bey, dean of the Faculty of Veterinary Medicine at Cairo, for his guidance in preparation of this work; and Drs. Hosny Mahmoud, M. R. El-Hindawy, and Kamal Seoudi, assistant professors in the Faculty of Veterinary Medicine, for their help.

was seen. "C" was dissolved in 10 per cent sodium hydroxide solution, heated but not boiled, and shaken until completely dissolved. It was centrifuged and the deposit was examined for the presence of mites; mites were found in every gland.

Fig. 2—Demodex canis larva in the thickened connective tissue septum of the submaxillary lymph gland of a dog.

In a second experiment, 5 dogs with demodectic mange were destroyed by chloroform. Submaxillary, axillary, internal iliac, superficial inguinal, and popliteal lymph glands were removed. Each gland was dissolved in 10 per cent sodium hydroxide solution, heated but not boiled, centrifuged, and the deposit examined for the presence of mites. Mites were found in every gland.

Method 3.—In the first experiment, a bitch with demodectic mange and distemper was treated for mange with benzyl benzoate and gentain violet. Submaxillary, axillary, and internal iliac lymph glands were removed immediately after death. Sections from each gland were made with the freezing microtome, stained with hematoxylin-eosin, and examined microscopically. No parasites were found.

In the second experiment, 5 animals with demodectic mange were destroyed with chloroform. Submaxillary, axillary, internal and external iliac lymph glands were removed, sectioned, stained with hematoxylin and eosin, and examined microscopically. Mites were present in sections from the axillary and submaxillary lymph glands of 1 of these dogs (fig. 1, 2, 3).

Conclusion and Discussion.—The author was able to demonstrate the presence of *Demodex canis* mites by preparing sections from the lymph glands of infected dogs (fig. 1, 2, 3). Mites were found in 11 of the 18 dogs examined. This supports the

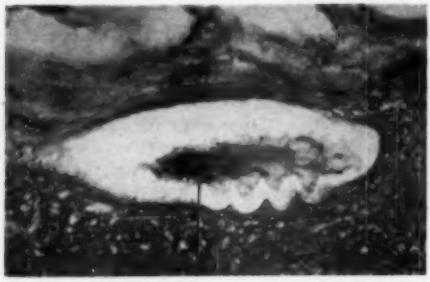

Fig. 3—Adult Demodex canis under the capsule of the submaxillary lymph gland of a dog.

work of Canepa and de Grana[1] and Unsworth[2] who had demonstrated the mites in the lymph glands.

Boiling the lymph glands seemed to destroy the mites, thus the best technique was to heat and shake the 10 per cent sodium hydroxide solution until the glands were dissolved.

References

[1]Canepa and da Grana: The Presence of D. Follicularum in Lymph Nodes of Infected Dogs. Rev. Fac. Agro. Vet. Buenos Aires, 9, (1941): 107-114.

[2]Unsworth, K.: Studies on the Clinical and Parasitology Aspect of Canine Demodectic Mange. J. Comp. Path. and Therap., 2, 1946.

Collection of Samples from Reproductive Tracts of Cows

The following paragraph was omitted from the article, "An Instrument for Collecting Samples from the Reproductive Tract of Cows for Bacteriological Study," by A. H. Frank and J. H. Bryner (August, 1952:97-98):

Escherichia coli, Streptococcus bovis, Streptococcus pyogenes, Vibrio fetus, and ***Pseudomonas aeruginosa*** are some of the organisms which have been isolated from the vagina with this instrument. Organisms isolated from the uterus include ***E. coli, Str. pyogenes, Str. bovis, Corynebacterium bovis, and V. fetus.***

Veterinary Practice in France in 1829

C. M. LOMBARD, B.A., M.A., and L. S. LOMBARD, D.V.M., Ph.D.

Philadelphia, Pennsylvania

THE VETERINARIAN in twentieth century America may encounter routine difficulties in his everyday practice but perhaps he would be better satisfied with his lot if he had some concept of the problems facing his French predecessors in the early part of the nineteenth century.

In the course of our investigations in other fields, we came upon an article in the *Recueil de Médecine Vétérinaire* of 1829, by a Dr. A. Yvart, entitled "Reflections on the Practice of Veterinary Medicine."[1] The subject treated by Dr. Yvart was a petition addressed to the Chamber of Deputies by the veterinarians of Tarn concerning abuses that existed in the practice of their profession.

The members of the commission bearing the petition requested that the practicing of veterinary medicine without a diploma be forbidden. They cited, as an example of prevalent abuses, the case of a blacksmith who beheaded some sheep under the pretext of curing them of the gid, although the gentleman did not hesitate to eat the meat of his patients.

In the subsequent discussion that took place in the Chamber of Deputies, one member saw no need for new legislation since any violations could be considered in the court of his majesty, the King of France. Another member, however, displayed more foresight in explaining to his colleagues that the profitable employment of veterinarians would lead not only to the cure of animal diseases but also to the establishment of better conditions of sanitation among French livestock. To fulfill this aim, he demanded that only licensed veterinarians be permitted to practice and that the farmers be indoctrinated in the fundamentals of veterinary science. It was recognized that the ignorance of the general public was a condition on which the charlatans thrived.

A humorous note was injected by a remark that veterinary schools were producing too learned and brilliant a group of students. This observation was the occasion for spontaneous laughter. In calling for the establishment of more veterinary schools, it was pointed out that many veterinarians were often better trained than physicians, but they refused to stoop to country practice. As a result, farmers were forced to rely on the quacks.

Still another member opposed too strict a law that would not allow the farmers to assist their neighbors who had sick animals. He reminded his associates that ignorant regions are often poor ones and suggested that at times the veterinarian's fee was a trifle high and exceeded the actual value of the animal.

He was assured that only a few veterinarians charged an exorbitant fee and that qualified people, other than veterinarians, would be permitted to care for diseased livestock. The increase in competition would lower the standard fee, one declared.

The author then related how the matter, after being discussed in the Chamber of Deputies, was next brought before the minister of the interior. He refers briefly to the veterinary school at Toulouse, instituted the preceding year, and reflects that in time the students at that school will show whether their teachers have taught them too much, as the faculty of Alfort and Lyons were accused of doing by one of the honorable members of the Chamber of Deputies.

Dr. Yvart then outlines briefly his ideas on the improvement of veterinary practice in France. All protests to the contrary, he maintains, quackery is rampant and must be stopped; owing to insufficient laws, the veterinarian is confronted not only with the obstacle of disease but that of quackery as well. He tells of the slaying of a buffalo in one district twenty years before by peasants who thought the animal was the devil in disguise. Although believing that the public is somewhat better informed since then, he urges government subsidy to encourage veterinarians to enter poorer

From the Department of French, Villanova College, Villanova, Pa. (C. M. Lombard); and the Department of Microbiology, School of Veterinary Medicine, University of Pennsylvania, Philadelphia (L. S. Lombard).

[1]Yvart, A.: Réflexions sur l'exercice de la médecine vétérinaire. Rec. de Méd. Vét., 6, (1829): 298-311.

areas so that conditions for raising livestock could be improved. To accomplish this end, the veterinary profession must be accorded the status it deserves, he continues, because young veterinarians were leaving school to find quacks competing with them in all parts of the country. A few unscrupulous veterinarians have issued certificates to so-called students, usually charging a fee in proportion to the ignorance of their "pupils." Proper laws, Dr. Yvart feels, will curb these abuses and serve the common interest, and foster a science that had its birth in France under Louis XV.

Thus, in a brief study of the state of veterinary practice in another era we have touched on a few aspects, some amusing, some informative, which perhaps may enable us to better realize and appreciate the traditions of the profession, as typified by one man, Dr. Yvart, a pioneer in his time, although long since forgotten.

Leptospirosis in Swine

M. E. BOYER, D.V.M.

Freeport, Illinois

In March, 1952, a group of 70 gilts that had been bred to hybrid boars were aborting about two to three weeks prior to their normal delivery time. The owner's veterinarian had bled several sows and found them negative to the agglutination test for brucellosis.

These sows were fed a good commercial preparation containing protein and mineral at the recommended rate with home-grown grain. They were following a group of feedlot heifers from the Southwest.

Upon questioning, it was further revealed that the owner had lost 1 heifer and 2 or 3 others were sick with a condition diagnosed as nephritis. Because the sows' ration and management seemed sound and the test for brucellosis was negative, we considered the possibility of leptospirosis as an etiological factor.

Five sows that had aborted were bled and the serum pooled and sent to the University of Illinois with instructions to re-check for brucellosis and submit samples to Dr. Karl R. Reinhard, Rocky Mountain Laboratory, Hamilton, Mont., for a test for leptospirosis. The test for brucellosis was negative, while the test for leptospirosis revealed a positive titer of 1:100,000. Because of the long interval before these results were known, it was impossible to bleed the sows again, since in the interim 40 had aborted and were marketed. However, we returned and bled 5 heifers, including 1 that had a previous history of nephritis (the others had been shipped), and also bled 2 boars and 3 sows that had farrowed normally. The samples were all negative to brucellosis. Again the serum was pooled and sent to Dr. Martha K. Ward, Communicable Disease Center, Chamblee, Ga. The bovine samples had a titer of 1:4,000; the swine samples a titer of 1:8,000.

It is our hypothesis that there is a good chance that the source of the infection (*Leptospira pomona*) was picked up from the infected cattle.

We should explore other possible infectious factors as a cause of abortion in swine, since it has been my experience that in 7 or 8 cases out of 10, the agglutination test for brucellosis is negative.

Although the organism incriminated was not isolated and reproduced, we seem to have a good cause for suggesting a tentative diagnosis of abortion due to leptospirosis in this case. We hope that other practitioners will also consider it as possible etiological factor in unexplained cases of swine abortion and that a thorough study of this possibility will eventually be made.

Dr. Boyer is a practitioner in Freeport, Ill.

Several years ago, it was shown that certain organic arsenical compounds, when added to the ration, would improve the growth rate of chickens. Today, the chief compounds used are arsanilic acid, sodium arsanilate, and 3-nitro-4-hydroxy-phenyl arsonic acid. They appear to be about as effective as the antibiotics in stimulating growth. When fed at high levels, these compounds are toxic but, at the recommended levels, the arsenical accumulation in the bird's tissues is negligible.—*W. W. Craven, Ph. D., at Am. Feed. Mnfrs. A., May 8, 1952.*

Any chemical toxic to one form of life is potentially toxic to all forms — plant or animal.—*W. R. Pritchard, D.V.M., Minnesota.*

Phthalylsulfacetamide as a Treatment for Infectious Calf Scours

A. B. CHRISTIAN, D.V.M.

Asheville, North Carolina

DESPITE modern therapeutic agents, infectious diarrhea in calves continues to be a problem. This report indicates that one of the newer sulfonamides gives excellent results and offers distinct advantages over older sulfonamides.

Causes of Calf Scours.—There are two schools of thought as to the principal cause of infectious diarrhea in calves: (1) the etiological agent generally regarded as responsible is a virulent strain of *Escherichia coli* as reported by Hagan[1] and Smith.[2] This organism may be present in the intestinal tract of a newborn calf, or it may be acquired when the calf first begins to nurse and become virulent when the general condition is weakened. Thorp[3] also points out that the longer calf scours remain in a herd the more severe it becomes. This may be due to mutation and increased virulence of the infecting organism. (2) Calf scours are thought to be due to insufficient amounts of vitamin A and certain B-complex vitamins in the blood of the newborn calf as reported by Phillips[4] and associates. However, Spielman[5] and associates were unable to confirm these findings. They selected herds and classified them into good, fair, and poor, according to the management and calf-feeding program conducted on each farm. They concluded that feeding extra vitamins to newborn calves under all farm conditions did not reduce calf scours nor appreciably improve the general appearance or condition.

Therapeutic Agents Commonly Used.—Various chemotherapeutic agents have been used as a prophylaxis as well as a treatment for calf scours. Of these, the nonabsorbable sulfonamides, such as sulfathalidine, seem to have given the best results. Thorp[6] and associates have reported on the use of sulfathalidine in controlling calf scours. However, sulfathalidine exerts its bacteriostatic effect only in the lumen of the intestinal tract and a sulfonamide that would be absorbed into all layers of the intestinal wall, reaching the infecting organism, would seem more desirable and effective.

Another factor to consider in controlling calf scours is the early administration of normal bovine serum solids, plus vitamin K.[7] The normal bovine serum solids contain certain antibodies that are essential to the newborn calf. Still, after the infecting organism has become established in the digestive tract and in the mucous membrane, an effective chemotherapeutic agent is necessary to control the infection. In view of this, phthalylsulfacetamide was used as a treatment for calf scours. Phthalylsulfacetamide has been reported by Heineken[8] and Seneca as nonabsorbable. From the oral administration, the blood level is zero while a substantial amount readily penetrates into all layers of the small and large intestines. Henderson,[9] while studying the bactericidal action of phthalylsulfacetamide on the genus Shigella

TABLE I—Results of Treatment of Calf Scours with Phthalylsulfacetamide

Case (No.)	Age (days)	Treatment twice daily	Days treated	Remarks
16D1	8	60 gr.	3	Recovered
17D1	7	60 gr.	3	Recovered
18D1	4	60 gr.	3	Recovered
19D1	6	60 gr.	3	Recovered
20D1	7	60 gr.	3	Recovered
21D1	5	60 gr.	3	Recovered
23D1	4	60 gr.	3	Recovered
24D1	2	90 gr.	3	Died
25D1	4	90 gr.	2½	Severe; recovered
26D1	5	90 gr.	2	Recovered
27D1	2	90 gr.	2	Died
30D1	5	90 gr.	2	Recovered
31D1	4	90 gr.	2	Recovered
32D1	6	90 gr.	2	Recovered
33D1	5	90 gr.	2½	Recovered
1E1	4	90 gr.	2½	Recovered
3E1	5	90 gr.	2	Recovered
4E1	7	90 gr.	2	Recovered
6E1	6	90 gr.	3	Severe; recovered
7E1	5	90 gr.	2	Severe; recovered
12E1	5	90 gr.	2½	Severe; recovered
15E1	4	90 gr.	2	Severe; recovered
16E1	4	90 gr.	2	Severe; recovered
18E1	8	90 gr.	2½	Severe; recovered
21E1	5	90 gr.	2½	Severe; recovered
29E1	4	90 gr.	3	Severe; recovered
11E8	6	90 gr.	2	Recovered

From the Biltmore Dairy Farms, Biltmore, N. Car. Phthalylsulfacetamide (thalisul) was furnished by the S. E. Massengill Company, Bristol, Tenn.

observed a marked reduction in the bacterial flora of the intestinal tract.

Clinical and Toxicity Studies.—Since there were no available data on the toxicity of phthalylsulfacetamide on calves, toxicity studies were conducted. Five grade dairy calves, 4 weeks old and with an average weight of 105 lb., were given, orally, twice the recommended dose (4 gr./lb.) for five days. No toxic results were observed during administration of the drug and no untoward symptoms could be detected, although the animals were kept under close observation for two weeks after discontinuing the drug.

Clinical Studies.—The present study includes 27 cases of infectious calf scours diagnosed clinically and ranging from mild to severe. The calves were from a herd of 1,400 purebred Jerseys, where individual care and constant supervision was the rule. The calves were housed in well-bedded, individual pens in 16 pen barns. They were allowed to remain with the mother for twenty-four hours, after which they were moved to pens and pail-fed colostrum for three days, then placed on whole milk. In the event of scours, the calf was removed to an isolation barn and treatment was instigated. The most prominent symptoms were a watery diarrhea and loss of appetite. Since we were dealing with a nontoxic sulfonamide, large doses were given. Seven cases, with an average weight of 55 lb., each received 60 gr. of phthalylsulfacetamide twice a day. Another group of 20 calves, with an average weight of 57 lb., were given 90 gr. twice a day. Treatment was continued for three days but in some instances, when sufficient improvement was noted, the drug was discontinued in a shorter period. Two fatalities occurred in the series—in a 2- and a 4-day-old calf. Both had a profuse bloody diarrhea and were in a severely weakened condition when treatment was started.

SUMMARY

Twenty-seven cases of infectious calf scours were treated with phthalylsulfacetamide. It was found effective when a total of 2.5 gr. per pound of body weight was given daily in divided doses. Due to its ability to be absorbed into the intestinal lining, reaching deep-seated infections, it is a valuable treatment for infectious calf scours.

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Bone Implantation in Studying Vitamin D Action

The tibias were taken from 1-day-old chicks. One from each chick was kept as a control, the other was implanted along the ribs of 2-week-old chicks, half of which were rachitic and half nonrachitic. The normal chicks were fed vitamin D while vitamin D was withheld from the rachitic chicks. The implanted tibias were removed in four days and compared with their nonimplanted mates. Whereas the bones from the rachitic chicks had lost calcium, those from the nonrachitic chicks had gained calcium. In other experiments, the femurs from rats were implanted into the peritoneal cavity of rachitic or nonrachitic rats with roughly similar results. However, these experiments add very little to the knowledge of how vitamin D functions.—*Science, March 28, 1952.*

Chickens can stand extreme cold but because of their normally high temperatures they can't stand heat. Many will die when the room temperature gets above 100 F., especially when the humidity is high.—*E. B. Ingmand, D.V.M., Iowa.*

Antibiotic Blood Levels in Turkeys Following Penicillin-Streptomycin Implantation

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THE EFFICACY of penicillin in the treatment of erysipelas and spirochetosis, and of streptomycin in the treatment of infectious sinusitis and air sac infection, in turkeys has been well established in the literature. Since, in many instances, these specific infections are complicated by bacterial secondary invaders susceptible to the other of these antibiotics, and because of the synergism of the two antibiotics, [1,2] administration of the combination might be expected to result in a more satisfactory response.

Goldsby and Eveleth,[3] in their report on pseudomoniasis in poultry, state that death losses in this disease can be prevented by the use of penicillin-streptomycin tissue implants. Eveleth[4] reports on the desirability of a penicillin-streptomycin implant in turkeys in the treatment of infectious sinusitis complicated by air sac infection, erysipelas, and pseudomoniasis; he concluded that the implant, with associated topical treatment, was the most satisfactory method. Christofferson,[5] from an extensive field study, concludes that "the subcutaneous implantation of 1 to 4 pellets, each containing 5,000 units procaine penicillin G and 6.25 mg. dihydrostreptomycin base . . . in the treatment of infectious sinusitis in turkeys resulted in marked reduction of mortality rate and significant improvement of carcass grade at slaughter."

Since this method of administration of the antibiotics seems more economical and more convenient to apply, and since Christofferson[5] reported additionally that the antibiotics in combination "administered intramuscularly resulted in no improvement in comparison with untreated birds," this investigation was made to determine the blood levels developed in birds following subcutaneous treatment.

All birds involved in this investigation were normal Broad Breasted Bronze turkeys weighing 14 to 16 lb. obtained from a local commercial producer. They were held in individual laboratory cages during the experiment period.

The pellets* were stated to contain 5,000 units of procaine penicillin G and the equivalent of 6.25 mg. of dihydrostreptomycin base as sulfate (the formula used by Christofferson[5]).

TABLE 1—Dose: Two Pellets Implanted per Turkey

Turkey	Normal	Units penicillin/ml. turkey blood serum				
		1 hr.	4 hr.	8 hr.	12 hr.	24 hr.
1	0	0.128	0.125	0.073	0	0
2	0	0.128	0.102	0.097	0	0
3	0	0.150	0.102	0.094	0	0
4	0	0.115	0.145	0.062	0.036	0
5	0	0.120	0.099	0.065	0.078	0
6	0	0.175	0.120	0.068	0.053	0
7	0	0.130	0.111	0.082	0.062	0
8	0	0.149	0.120	0.082	0	0
9	0	0.198	0.182	0.090	0.050	0
10	0	0.110	0.074	0.057	0.036	0
Ave.		0.140	0.118	0.077	0.032	0
		μg. streptomycin/ml. turkey blood serum				
		1 hr.	4 hr.	8 hr.	12 hr.	24 hr.
1	0	3.25	2.60	1.30	0.55	0
2	0	7.10	2.15	0	0.47	0
3	0	4.20	3.15	1.95	0	0
4	0	2.70	2.60	1.50	1.40	0
5	0	2.50	1.60	0.58	<0.30	0
6	0	1.30	3.10	1.30	0.51	0
7	0	3.00	3.00	1.15	1.70	0
8	0	2.40	2.75	1.15	0.51	0
9	0	3.40	2.15	1.00	0.45	0
10	0	2.45	2.45	—	<0.30	0
Ave.		3.23	2.56	1.10	0.62	0

Three groups of 10 birds each, after withdrawal of normal blood samples, were implanted with two, four, and six pellets per turkey respectively; a commercial implanter was used and the pellets were placed in the subcutaneous tissues of the neck region. The birds were then bled at one-, four-, eight-, twelve-, and 24-hour intervals and the serum content of penicillin and dihydrostreptomycin was determined by the microbiological cup plate method. (For results, *see* tables 1, 2, and 3.)

To determine the comparison with similar doses in aqueous vehicle, another group of 10 birds was given the approximate antibiotic equivalent of the four-pellet dose in 0.5 cc. of sterile, distilled water administered subcutaneously in the neck region.

From the Department of Veterinary Service, Wyeth Inc., Philadelphia.

An expression of gratitude is extended to Marion Broome and Aida Seltzer, both of the Penicillin Division, Wyeth Inc., West Chester, Pa., for their technical assistance in the project.

*The pellets were supplied by Wyeth Inc.

The figures in the tables show unaccountably wide variations in values of the individual birds in each group. Calculation and comparison of the averages for each group at each bleeding are shown in table 5.

TABLE 2—Dose: Four Pellets Implanted per Turkey

Turkey	Normal	Units penicillin/ml. turkey blood serum				
		1 hr.	4 hr.	8 hr.	12 hr.	24 hr.
1	0	0.214	0.160	0.067	0.052	0
2	0	0.145	0.205	0.131	0.050	0
3	0	0.275	0.235	0.109	0.059	0
4	0	0.145	0.195	0.090	0.067	0
5	0	0.145	0.235	0.074	0.055	0
6	0	0.310	0.195	0.115	0.067	0
7	0	0.200	0.345	0.195	0.053	0
8	0	0.120	0.160	—	0.046	0
9	0	0.150	0.120	0.160	0.062	0
10	0	0.160	0.260	0.067	0.034	0
Ave.		0.186	0.211	0.112	0.055	0
		μg. streptomycin/ml. turkey blood serum				
		1 hr.	4 hr.	8 hr.	12 hr.	24 hr.
1	0	2.40	2.50	2.62	1.49	<0.3
2	0	1.70	2.85	4.40	1.30	<0.3
3	0	2.70	1.30	—	1.30	<0.3
4	0	1.70	4.80	2.50	1.30	<0.3
5	0	1.82	6.20	—	1.00	2.85
6	0	4.20	3.10	2.40	0.68	<0.3
7	0	4.20	4.00	1.49	1.60	<0.3
8	0	5.60	1.30	1.70	1.49	<0.3
9	0	1.25	2.85	1.90	1.75	<0.3
10	0	1.70	1.15	—	1.00	<0.3
Ave.		2.73	3.01	2.43	1.29	<0.3

This study indicates, in general, that the extent and duration of penicillin and streptomycin blood levels in normal turkeys following a single dose of the antibiotics is in direct relation to the amounts administered. But it is believed that these criteria, commonly used in the various branches of medicine today, may give but an incomplete picture as evidenced by differences between good clinical response and only average laboratory findings. In therapy, it is desired to develop an antibiotic concentration in the affected body areas to effect bacteriostasis; it is suggested that diseased tissues may retain amounts of the antibiotics greater than those demonstrable in the systemic circulation.

TABLE 3—Dose: Six Pellets Implanted per Turkey

Turkey	Normal	Units penicillin/ml. turkey blood serum			
		1 hr.	4 hr.	8 hr.	24 hr.
1	0	0.380	0.310	0.215	0.300
2	0	0.345	0.285	0.150	0.026
3	0	0.300	0.345	0.205	0.028
4	0	0.325	0.360	0.260	0.031
5	0	0.285	0.245	0.220	0.028
6	0	0.125	0.260	0.175	0
7	0	0.420	0.260	0.160	0
8	0	0.325	0.345	0.170	0
9	0	0.245	0.150	0.170	0
10	0	0.325	0.300	0.195	0
Ave.		0.308	0.284	0.192	0.041
		μg. streptomycin/ml. turkey blood serum			
		1 hr.	4 hr.	8 hr.	24 hr.
1	0	16.0	9.8	5.9	11.2
2	0	16.0	8.0	5.9	0
3	0	12.5	7.0	5.2	0
4	0	7.4	7.4	6.7	0
5	0	4.4	4.4	8.0	0
6	0	4.4	3.7	4.2	0
7	0	9.1	4.8	4.2	0
8	0	12.5	6.2	6.2	0
9	0	8.7	4.8	3.7	0
10	0	5.8	5.4	4.0	0
Ave.		9.68	6.15	5.4	1.12

TABLE 4—Total Procaine Penicillin G, 20,000 Units; Total Dihydrostreptomycin Base as Sulfate, 25.0 mg. Dose: 0.5 cc. per Turkey

Turkey	Normal	Units penicillin/ml. turkey blood serum				
		1 hr.	4 hr.	8 hr.	12 hr.	24 hr.
1	0	0.760	0.310	0.074	0.110	0
2	0	0.680	0.500	0.065	0.062	0
3	0	0.420	0.175	0.110	0.090	0.028
4	0	0.310	0.175	0.110	0.110	0
5	0	0.490	0.195	0.120	0.082	0.023
6	0	0.345	0.140	0.078	0.050	0.042
7	0	0.345	0.160	0.062	0.131	0.050
8	0	0.640	0.380	0.050	0.074	0
9	0	0.500	0.300	0.260	0.345	0.095
10	0	0.160	0.160	0.215	0.082	0
Ave.		0.465	0.250	0.114	0.114	0.024
		μg. streptomycin/ml. turkey blood serum				
		1 hr.	4 hr.	8 hr.	12 hr.	24 hr.
1	0	22.50	13.50	3.70	1.82	<0.3
2	0	15.00	15.00	4.20	1.15	<0.3
3	0	7.00	5.40	4.80	1.70	—
4	0	10.50	3.70	2.30	0.86	0
5	0	17.50	5.40	1.76	0.78	—
6	0	—	4.20	1.35	1.19	0.51
7	0	20.00	13.50	3.70	1.70	<0.3
8	0	20.00	12.50	2.00	1.15	0
9	0	4.80	15.00	5.40	4.20	0.78
10	0	3.70	1.90	1.30	0.85	0
Ave.		13.44	9.01	3.05	1.54	<0.28

TABLE 5—Tabulation of Averages of Tables 1, 2, 3, and 4

	Dose	Bleeding intervals				
		1 hr.	4 hr.	8 hr.	12 hr.	24 hr.
Units of penicillin per ml. turkey blood serum	2 pellets	0.140	0.118	0.077	0.032	0
	4 pellets	0.186	0.211	0.112	0.055	0
	6 pellets	0.308	0.284	0.192	—	0.041
	Aqueous equivalent 4 pellets	0.465	0.250	0.114	0.114	0.024
Micrograms of streptomycin per ml. turkey blood serum	2 pellets	3.23	2.56	1.10	0.62	0
	4 pellets	2.73	3.01	2.43	1.29	<0.3
	6 pellets	9.68	6.15	5.4	—	1.12
	Aqueous equivalent 4 pellets	13.44	9.01	3.05	1.54	<0.28

SUMMARY

Two to six pellets, each containing 5,000 units of procaine penicillin G and the equivalent of 6.25 mg. of dihydrostreptomycin base as sulfate, when implanted subcutaneously in turkeys resulted in demonstrable blood serum levels of both antibiotics of twelve to twenty-four hours' duration, approximately equivalent to levels produced by an equal amount of the antibiotics administered subcutaneously in aqueous injection.

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Diarrhea Associated with Pancreatic Disease

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The purpose of this case report is to reawaken the small animal practitioner to a specific cause of diarrhea that may frequently be overlooked since some investigation is necessary to diagnose it. The case reported here is the latest of some 10 or more that have been presented in the past twenty-four months.

The patient, a 4-year-old male Irish Setter, was thin and had a purulent discharge from the eyes and a voracious appetite. The owner reported that for eight months the dog had been treated for feces that were always loose and varied in color from chalky white to green. Excretions averaged two to four times daily. A diagnosis of distemper had been made a year previously and was accepted as the cause for the continued diarrhea.

The animal was admitted for a complete check-up. Checks on the stools for parasitic ova, a urinalysis, and a blood sugar test were negative. X-ray pictures revealed nothing. However, repeated examinations of the stools showed much undigested muscle fiber and unsaponified fat which was the real clue to the cause of the trouble. It was decided to use the adrenalin mydriasis test described by Hutyra and Marek in "Pathology and Therapeutics of Domestic Animals" as follows: "The adrenalin mydriasis with dogs having no pancreas was always positive. Three drops of 1 : 1,000 solution of adrenalin are twice instilled into the conjunctival sac at intervals of five minutes. Thereupon in cases of severe and extensive affections of the pancreas, dilatation of the pupils takes place, indicating absence of the inhibitory action of the internal secretions of the pancreas upon the sympathetic nervous system." This test was applied twice in forty-eight hours and was positive each time.

Panteric tablets (Parke-Davis) were prescribed to be given with, or one-half hour after, each meal; the owner was instructed to feed the dog three times daily. Hill's prescription ration K/D had been fed at the rate of one-half can three times daily during the three days the dog was in the hospital, and was dispensed to be fed after the dog was discharged. On the third day of the medication, the stool had a normal form but the color was pale. The patient was sent home on the fourth day. The owner reported that the dog has had one normal stool daily ever since. He has been seen every two weeks for a check up. The panteric tablets were given for about thirteen weeks and now, almost three weeks since they were discontinued, the dog still has normal movements once daily. Hill's P/D ration, one and one-half cans daily, has been mixed with the food in an effort to improve his condition. Whether the patient will always remain thin in spite of improved pancreatic digestion remains to be seen. One can only assume that a pancreatitis was the initial trouble, and that proper rest and treatment have reactivated the organ or, rather, the pancreatic enzymatic cells.

With so much attention now being given to histoplasmosis and other conditions which are accompanied by prolonged diarrhea, too little consideration is given to the possibility that it might be due to pancreatic diseases. It is the author's belief that

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this organ is involved much more frequently than is recognized, and it is hoped that this article will help to reawaken interest in this most vital internal organ.

Editorial Comment.—Acute and chronic pancreatitis probably occur more frequently following generalized infections than is generally recognized.

Partial or complete achylia of the pancreatic juices often follows such an infection. In such an illness, examination of the stools will show large quantities of meat fibers (creatorrhea). The presence of 25 per cent or more of nitrogen in the stool is suggestive of chronic pancreatitis. Also of great diagnostic value is the presence of increased total lipids in the stool.

Nitrogen: normal, 1.5 to 2.3 Gm.; positive, 4.5 to 13.3 Gm.

Lipids: normal, 7.0 to 10.0 Gm.; positive, 44.5 to 94.0 Gm.

The adrenalin mydriasis test is helpful for diagnosis but the stool tests are more convincing. —W. H. R.

Recent Outbreak of Leukocytozoon Infection in Adult Turkeys in Georgia

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Numerous cases of Leukocytozoon infections have been reported in various parts of the United States. Most reports confine the infection to birds under 12 weeks of age, with varying mortality. Travis, Goodwin, and Gambrell[1] conducted a survey of the infection in the southeastern states and found 289 infected turkeys of 357 examined in Georgia. All of the infected birds were considered to be adults. There are no subsequent reports of the disease in Georgia. In view of this, it is felt that a recent case in a central Georgia flock should be described, including the case history, autopsy findings, and recommendations to the owner.

Case History.—On Sept. 4, 1951, a central Georgia turkey grower brought 4 Broad-Breasted Bronze turkeys to the poultry diagnostic laboratory at the School of Veterinary Medicine, University of Georgia, for autopsy and diagnosis of the disease affecting them. The owner stated that there were 1,600 birds in the flock at the onset of the disease. Mortality during the previous seven days had been 75 per cent or 1,200 of the original 1,600 birds. The turkeys at this time were 5 months of age. Prior to the outbreak, all of the birds were moved to a new range never before used by turkeys or other fowl. The symptoms seen were droopiness, yellow to greenish yellow droppings, drunken posture, coarse coughing just prior to death, and birds running along on tiptoe unable to stand. The owner suspected poisoning of some kind. All had been vaccinated for fowlpox. During the outbreak, they were treated with sulfaquinoxaline with no apparent effect on the course of the disease.

Upon further questioning, the owner revealed that a large number of Buffalo gnats, probably Simulium sp., had been observed in the vicinity of the roosts and feeding troughs. Also, it was learned that just prior to removal of the birds to a new range, the old range had become muddy and foul smelling after a rainy period.

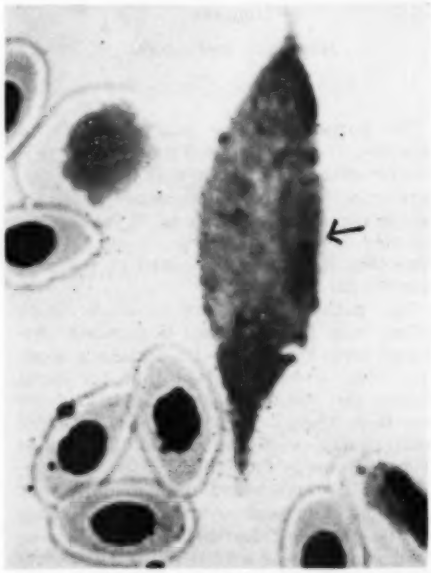

Fig. 1—Leukocytozoon smithi, x 1,400 (approx.), single-bar type, stained with methylene blue, in comparison with enucleated red blood cells.

From the Department of Pathology and Parasitology (Tumlin and Cooperrider), and Department of Anatomy (Stoddard), School of Veterinary Medicine, University of Georgia, Athens.

[1]Travis, B. V., Goodwin, H. M., Jr., and Gambrell, E.: Preliminary Note on the Occurrence of Leucocytozoon Smithi in Turkeys in Southeastern U. S. J. Parasitol., 25, (1939):278.

Autopsy Findings.—Routine autopsy technique revealed no pathological lesions or conditions in any part of the body except in the small intestine and circulatory system. An inflammation of the mucosa, accompanied by a loose fibrinous exudate yellow to ivory in color, was noted throughout the entire length of the small intestine.

Smears, made from heart blood and stained with Wright's stain and Loeffler's methylene blue, revealed many of the protozoon parasites, *Leukocytozoon smithi*, in various stages of development. The stages most often seen are shown in figures 1 and 2.

Culture inoculations of the heart blood and liver tissue were negative for growth twenty-four hours later.

On the basis of the symptoms and blood picture observed on the slides, the outbreak was diagnosed as Leukocytozoon infection.

Recommendations.—Since no known treatment is available for this disease, none was recommended to the owner. He was advised, however, to remove and destroy all birds showing any symptoms of infection and move the remaining birds to an unused, new range. Should this be impossible or impractical, he was further advised to sell all remaining healthy birds and exterminate all sick ones. Subsequent investigation showed that depopulation was the recommendation followed.

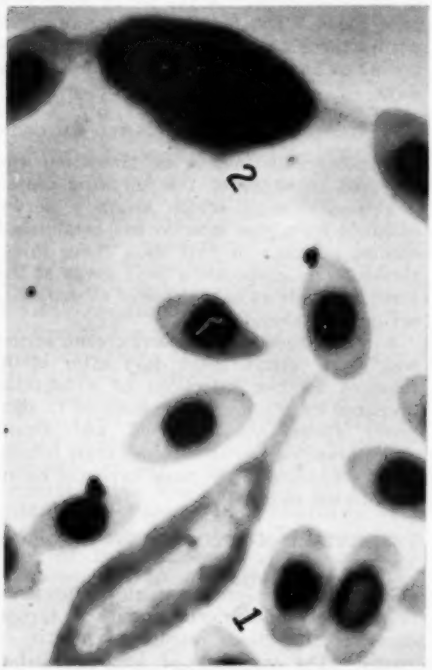

Fig. 2—Leukocytozoon smithi, x 1,400 (approx.), double-bar type (1), and solid-appearing type (2) stained with Wright's blood stain.

Organisms in Eggs killed by Cooking

Since susceptible individuals may become ill after eating eggs contaminated with *Salmonella pullorum*, artificially infected eggs were cooked in various manners and tested to determine what percentages of the organisms had been killed by cooking. In some eggs, the yolk had been inoculated with the *Salmonella pullorum* organisms; in others, the white had been inoculated. Perhaps due to the fat content, the organisms in the yolk were more difficult to kill than those in the egg white. All the organisms were killed in scrambled eggs in an average of one and one-half minutes. Ninety-two per cent of the organisms were killed in an egg boiled for four minutes. A much smaller percentage of the organisms were killed when eggs were either fried, poached, or soft-boiled. The organisms were found to live in cold-storage eggs for many months.—*J. Milk and Food Technol., March-April 1952.*

Chloromycetin Poisoning

The Food and Drug Administration is planning a national check up on the antibiotic chloramphenicol (chloromycetin). It is suspected as the cause of several cases of blood dyscrasia in man. The *Journal of the American Medical Association* (June 28, 1952), in an editorial, warns that "physicians should be on the alert for reactions following therapy with this (chloramphenicol) and any other antibiotic, or in fact any of the newer drugs." It reports that two types of reactions have been reported, one a transient depression of red cells, white cells, and platelets; the other a true aplastic anemia which may be fatal.

The treatment of tuberculosis in mice with ACTH and streptomycin produced no significant results.—*Vet. Bull., April, 1952.*

Streptomycin and Other Agents Used in Infectious Atrophic Rhinitis of Swine

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RESEARCHES into the nature of infectious atrophic rhinitis of swine have failed thus far to elucidate the cause of the disease. Some phases of a study of this disease at the Ontario Veterinary College have been reported.[1,2,4,5] In conjunction with this work, observations were made to determine the value of a variety of agents in controlling rhinitis.

The empirical approach apparent in the initial stages of these experiments seemed justified on the basis of the information available at the time, and it is of sufficient interest to report briefly on all agents used in field and laboratory experiments, *seriatim*.

CORYNEBACTERIUM PYOGENES SERUM

Following the work of Phillips,[4] who assumed that *Corynebacterium pyogenes* had significance in producing secondary lesions in rhinitis, a field project was undertaken to determine whether biological products prepared from this organism would have some value in modifying the effects of the disease. Observations were made on the use of *C. pyogenes* hyperimmune serum alone and in conjunction with a bacto-toxoid prepared from the same organism.

The procedure adopted was to inoculate approximately half of each litter under test with the selected biological product, leaving the remainder as uninoculated controls.

In one experiment involving 208 pigs, 110 were inoculated, leaving 98 untreated controls. The treated pigs were given 10 cc. of *C. pyogenes* hyperimmune serum within three days after birth, 3 cc. of bacto-toxoid in ten to fourteen days, and a second injection of 5 cc. of bacto-toxoid within ten to fourteen days after the first. All pigs were exposed to natural infection since only herds passing through an outbreak were chosen for the experiment, and no attempt was made to check the spread of the disease except for the use of serum and bacto-toxoid in the subject group.

Twenty-six (23.6%) of the inoculated pigs, and 27 (27.5%) of the controls developed rhinitis. This level of incidence of infection, on the basis of clinical symptoms, is similar to that which occurs in a natural outbreak. Thus, it could not be demonstrated that any degree of protection resulted from the use of *C. pyogenes* hyperimmune serum followed by bacto-toxoid.

Using a smaller number of pigs, it was found that no protection was afforded against rhinitis after three injections of *C. pyogenes* hyperimmune serum alone had been given. The first injection was given within three days after birth; the two following at intervals of fourteen to eighteen days.

CONVALESCENT SERUM AND MIXED BACTERIN

In other experiments, no protection was observed in either of the following cases:

a) Convalescent serum means a serum obtained from pigs showing well-established clinical evidence of rhinitis. Three injections of this agent alone were given at the same intervals as in the case of *C. pyogenes* serum used alone.

b) One injection of convalescent serum was given within three days after birth, followed by two injections of a bacterin prepared by mixing suspensions of *C. pyogenes*, *Pasteurella multocida*, and *Alcaligenes bronchisepticus* obtained from inflammatory exudate in the nasal cavity of rhinitis-affected swine.

PASTEURELLA MULTOCIDA ANTISERUM AND BACTERIN

Schofield and Jones[5] report the presence of a variety of bacterial species in typical cases of infectious atrophic rhinitis of swine. The majority of long-established lesions in mature swine yielded great numbers of *C. pyogenes*. In contradistinction, early cases of the disease rarely failed to

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Thanks are extended to Dr. D. L. T. Smith and Mr. K. A. McKay who assisted with the laboratory experiments, and to Drs. J. D. Schroder and J. W. MacPherson, who aided with the field experiments.

show the presence of *Pasteurella multocida* with other organisms, although frequently *C. pyogenes* was not present. It is probable, therefore, that *C. pyogenes* does not usually become established until after the initial lesions are produced.

The frequency with which *P. multocida* is observed with other organisms during the acute stage of the disease suggested the hypothesis upon which another field project was based.

For reasons thus far undetermined, it is possible that rhinitis infection occurs when *P. multocida* and other bacterial species grow synergistically. An attempt was made, therefore, to render conditions less favorable for the growth of these assumed requirements of infection. With this idea in mind, a preliminary experiment with 9 pigs was undertaken to elicit information on the value of immunization against the Pasteurella organism.

A commercial Pasteurella antiserum was used, while a bacterin was prepared from *P. multocida* strains obtained from the nasal area of rhinitis-affected pigs.

Four of the 9 pigs were not treated while 5 received the following:

10 cc. of Pasteurella antiserum, subcutaneously, fifteen days after birth;
3 cc. of Pasteurella bacterin, subcutaneously, twenty-two days after birth;
5 cc. of Pasteurella bacterin, subcutaneously, twenty-seven days after birth.

The 9 pigs were placed in the contact area on the seventeenth day after birth. Two of the 5 treated pigs and 3 of the 4 untreated controls developed rhinitis.

Although the number of pigs used was small, the results of this experiment indicated a trend which favored the possibility that Pasteurella immunization is of value in the control of rhinitis. It remained for a field experiment to be conducted to determine whether this procedure had merit.

Immunization was attempted by giving Pasteurella antiserum and bacterin by the subcutaneous route. At 1 to 3 days of age, 10 cc. of antiserum were given, and this was repeated in ten to fourteen days. After a similar interval, 5 cc. of bacterin were given.

As shown in table 1, a number of pigs in each of the litters used in this experiment served as controls. All pigs were exposed to natural sources of infection.

When the pigs reached market weight, they were slaughtered and an examination was made by removing the nasal septum after longitudinal bisection. Evidence of the disease was based on the finding of typical lesions.

TABLE 1—Pasteurella Immunization Against Rhinitis

Total number of heads examined — 115

Immunized pigs		Nonimmunized controls	
Total number	42	Total number	73
No. showing lesions	22	No. showing lesions	43
Percentage incidence	52	Percentage incidence	59

By the method employed in this field experiment, it was shown that immunization against Pasteurella failed to influence the incidence of rhinitis in herds in which an outbreak of the disease was in progress.

STREPTOMYCIN

Following unsuccessful experiments[5] to demonstrate a filterable virus associated with swine rhinitis, unfiltered infectious exudate was treated with penicillin and streptomycin. The bactericidal qualities of these antibiotics resulted in negative cultural tests for bacteria, and it was expected that the concentration of hypothetical virus in the exudate would not be affected. Pigs exposed to this antibiotic-treated exudate failed to develop lesions of rhinitis, while untreated exudate produced the disease. This experiment revealed the fact that the antibiotics used were capable of destroying the infectious agent. It was decided, therefore, to test the value of one of these — streptomycin — to determine its value when applied parenterally in preventing the disease in pigs exposed to exudate containing the infectious agent.

TABLE 2—The Effect of Streptomycin on Experimental Rhinitis

	Rhinitis-pos.	Rhinitis-neg.	Total
Treated group	4	9	13
Untreated group	11	2	13
Total	15	11	26

Three litters, totalling 26 pigs, were used in this experiment. Half the number of pigs in each litter were given 100,000 μg. of streptomycin intramuscularly at the end of the first, second, and third weeks after birth. Their litter mates served as untreated controls. During the three weeks following the first injection of the antibiotic, all pigs in the experiment were exposed at in-

tervals to eight nasal instillations of infectious exudate.

At 6 weeks of age, the pigs showing clinical symptoms of rhinitis were killed and at varying periods thereafter the remainder of the pigs were killed and examined for evidence of the disease. Table 2 records the results of this experiment.

The trend revealed by this experiment led us to test the value of streptomycin in reducing the incidence of rhinitis in an infected herd. Among 83 pigs farrowed, portions of each litter, totalling 37 pigs, received the antibiotic in the same way as the treated group in the previously described experiment. The remaining 46 pigs were not treated. When all pigs were slaughtered (at approximately 200 lb. live weight), their heads were examined for evidence of rhinitis. A summary of these postmortem examinations and the *chi* square test corrected for continuity (Mainland[3]) are given in table 3.

TABLE 3—The Effect of Streptomycin on a Natural Outbreak of Rhinitis

	Rhinitis-pos.	Rhinitis-neg.	Total
Treated group	6	31	37
Untreated group	18	28	46
Total	24	59	83

$\chi^2(c) = 4.183$; d.f. = 1; $P < 0.05$.

This test demonstrates that the differences in the numbers of animals affected with rhinitis in the two groups are significant at the 5 per cent level and therefore should not be considered to be the result of chance alone. It can be assumed, therefore, that the use of streptomycin, under the conditions of this experiment, reduced the incidence of rhinitis in a group of pigs exposed to a natural outbreak of this disease.

SUMMARY

Because of the frequent isolation of *Corynebacterium pyogenes* from rhinitis-affected swine, observations were made on the efficacy of biological products prepared from this organism in preventing rhinitis in suckling pigs. Three injections of hyperimmune serum alone failed to show any effect on the incidence of rhinitis in a natural outbreak. Negative results were obtained when two injections of bactotoxoid were given after an initial injection of hyperimmune serum.

Convalescent serum likewise had no effect on the incidence of the disease, nor did the procedure of injecting one dose of convalescent serum, followed by a bacterin prepared from three bacterial species commonly obtained from typical lesions of rhinitis.

Rarely is *Pasteurella multocida* absent from early lesions of this disease. Whether this organism is of etiological significance remains to be determined. No protection was afforded, however, by attempts to immunize suckling pigs in affected herds with one injection of Pasteurella antiserum followed by two doses of bacterin.

An intramuscular injection of 100,000 μg. of streptomycin given three times during the first month after birth reduced the incidence of rhinitis to a significant degree but did not control the disease completely.

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Cause of X Disease Identified

The U.S.D.A. has announced that one cause of x disease (hyperkeratosis) in cattle has been identified as chlorinated naphthalene compounds. Coöperating with the department, research has been carried on for about four years at 12 state agricultural experiment stations. The Tennessee station produced the disease by giving daily doses of pentachloronaphthalene. Such compounds are found in various products used on the farm but would not normally be found in the feeds which have produced x disease. The toxic chemical in such feeds has not yet been identified so the search continues.

The five recent outbreaks of anthrax in mink in Wisconsin were caused by their eating cattle carcasses, none of which were diagnosed as having anthrax before the mink developed the disease.—*G. R. Hartsough, D.V.M., Wisconsin.*

Field Survey of Brucellosis, Mastitis, and Rural Use of Pasteurized Milk

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THIS SURVEY was conducted recently in three adjoining townships in Washtenaw County, Michigan, on a farm-to-farm basis. It was of a voluntary nature and educational in purpose. Questionnaires were sent to 158 farmers, of which 155 submitted answers. Two were reluctant to participate and only one flatly refused. Over 4,000 cattle were represented, mostly dairy cows, but some calves, heifers, and beef cattle were included.

The survey was successful only because of the excellent coöperation and great interest shown by the cattle owners.

The purpose of the survey was to determine, if possible (1) the extent of brucellosis and mastitis among the cattle of the area and to learn what control measures have been employed in the case of brucellosis to identify the affected animals and to eradicate the disease from the herd; and (2) how many of the owners interviewed were using pasteurized milk in their homes, either by the use of home pasteurizing units or by purchasing pasteurized milk.

The following questions appeared on the questionnaire:

1) Have Any of Your Cows ever Aborted?

Of the 155, 35 (22%) answered yes. Many with negative answers indicated that they had had aborters in previous herds but had removed them. The total number of aborting cows was 106. In 4 cases, the number of cows that had aborted in the herd was not given. The number of animals affected in a given herd varied from 1 to 25.

2) Have Any of Your Cows or Heifers Become Sterile?

Of the 155 owners, 26 reported cases of sterility in their herds; 43 per cent of the 35 owners of aborters reported sterility, whereas only 9 per cent of the remaining 120 owners did so.

3) Have Any of Your Cows Had Mastitis?

Eighty-one answered yes. The 81 owners had a total of over 2,800 cattle. Of the 35 owners who had abortions in their herds, 30 (85%) also had mastitis; 42 per cent of the remaining 120 owners indicated mastitis in the herd.

4) Have Your Cattle ever Been Blood Tested for Brucellosis?

Of the 155, 94 had tested; 7 of the 35 owners of aborting cattle had not.

5) Has this Test Been Run Within the Past Year?

Forty-eight said yes (a little more than half of those who had tested).

6) Were Any Reactors Found?

Of the 94 owners who had tested, 25 said yes; 4 others reported suspects. This means reactors were found in 26 per cent of the herds tested.

7) What Was Done with the Reactors?

Twenty-three of the 25 owners had theirs slaughtered. One owner kept part and had part slaughtered.

8) Have Your Cattle Been Vaccinated for Brucellosis?

Fifty-nine of 155 owners reported yes.

9) Were All Cattle Vaccinated? (If not, give age groups that were.)

Thirty said all cattle were vaccinated; 29 had calfhood vaccination.

10) Does Your Family Drink Milk Produced by Your Own Herd?

Of the 155 owners, 134 (86%) said yes.

11) If so, Is the Milk Pasteurized by Heat Before You Use It?

Of the 134, 29 (21%) said yes.

12) Do You Buy All Your Milk for Family Use from a Store or Dairy?

Eighteen said yes. Therefore, 47 (30%) of the 155 owners use pasteurized milk in their homes. In addition, 9 others stated they bought pasteurized milk when their children or grandchildren lived with them or visited them, or else the visitors brought their own pasteurized milk with them.

13) Has Brucellosis (Undulant Fever) ever Been Diagnosed in a Member of Your Family?

One answered yes, indicating that 4 members of the family had been affected at a time when his dairy herd was badly infected with brucellosis. One owner reported cases of septic sore throat in his family which the physician believed to be caused by drinking raw milk from their herd in which mastitis was present. Use of a home pasteurizing unit checked it.

DISCUSSION

The area was a typical diversified farm-

Acknowledgement is given to Otto K. Engelke, M.D., director of the Washtenaw County-City of Ann Arbor Health Departments, for his interest and encouragement in the planning of this survey.

From the Department of Health, Ann Arbor, Mich. (coördinated with the Washtenaw County Health Department). The author, at present in charge of meat inspection in the Ann Arbor Department of Health, has been engaged in general practice, federal meat inspection, brucellosis work, and tuberculosis eradication.

ing area but not one accredited free of brucellosis. The farm buildings, equipment, sanitation, and care varied greatly from farm to farm. In size, the herds ranged from the family cow to large dairy herds. Veterinary service could be obtained from several directions, but at no point more than 10 miles distant.

No conclusions from this survey have been attempted. We do believe that the information obtained through a local survey of this kind strikes more forcefully than figures presented from national surveys since such facts always seem remote to the average individual.

It can be stated with certainty that the vast majority of the owners contacted were keenly interested in these disease problems and realized their importance from a public health and economic standpoint.

The Role of the New Antituberculosis Drugs

Three questions are raised concerning these drugs: (1) If these miracle drugs do retard the development of tuberculosis, will that lead to the emergence of new resistant organisms and relapses? (2) If they promote the survival of chronic cases, will that not provide more sources for infection? (3) If people believe these drugs will cure tuberculosis, will they then not curtail their support of hospitals and public health services for the control of tuberculosis? There must be no slackening in all of the measures that have been maintained to date.—*Medical Times, June, 1952.*

While searching for a penicillin compound that would be more slowly absorbed, doctors in Middlesex, England, developed one which seems to be attracted to, and accumulates in, inflamed lung tissues. It is known as "estopen."—*Brit. M. J., June 7, 1952.*

The University of Nevada is inaugurating a program to study the effects of methods used to control the poisonous weed, halogeton. The state's allotment for two years for this purpose is $600,000.

If we as veterinarians do a complete job in a conscientious manner we won't need many laws to protect us.—*E. B. Ingmand, D.V.M., Iowa.*

Notes from Annual Conference, Alabama Polytechnic Institute, June 5-7, 1952

There is a synergetic action when penicillin and sulfonamides are combined. The penicillin kills some of the organisms, the sulfonamide starves the rest.—*S. F. Scheidy, D.V.M., Pennsylvania.*

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For a newly freshened cow with a mastitis-paralysis complex, usually due to a Staphylococcus infection, dissolve 5 gr. of streptomycin in 500 cc. of calcium gluconate solution and give it intravenously by the drip method—10 cc. per minute. Also give 5 cc. of pituitary extract and have the cow milked frequently for four hours.—*R. D. Hoffman, D.V.M., Pennsylvania.*

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I've never found a healthy pup that didn't smell nice . . . . A blood transfusion will not cure anything but it is often a most important temporary measure. . . . A 25 per cent blood loss in one hour is serious, the same loss in twenty-four hours is not. . . . To cleanse a dog's "chronic" ear try a saturated solution of boric acid in pure grain alcohol.—*C. E. Bild, D.V.M., Florida.*

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Air Sac Disease in Poultry.—Poultry pathologists from seven eastern states met in Washington, May 22-23, 1952, with BAI officials to discuss air sac disease in poultry. Extensive investigation was planned at that time, since this disease has appeared in many sections of the country and has increased noticeably in the past year. It affects the respiratory tract and air sacs. Some birds recover in a few weeks, others show symptoms indefinitely, and about 30 to 50 per cent die.

• • •

Canine Hepatitis.—Infectious canine hepatitis is the only infection that produces the typical "blue eye." Often only one eye is affected. It is not keratitis and the disease is usually past its worst phase by the time the eye becomes cloudy. It will develop in the majority of the dogs which recover.

Infectious hepatitis is often symbiotic with canine distemper. They operate like the recent famous West Point backfield stars. Mr. Outside (distemper) hits the epithelial tissue while Mr. Inside (hepatitis) works on the endothelia.—*G. L. Ott, D.V.M., Wisconsin.*

A Study of Prepared Feeds in Relation to Salmonella Infection in Laboratory Animals

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BREEDING COLONIES have been maintained for many years at the laboratory farm 10 miles from the central laboratories. About 1921, a program was begun to eradicate infections due to Salmonella, Streptococcus, *Bacterium bronchisepticum*, and other microörganisms commonly causing epizoötics or enzoötics. It has been a single-step process, accomplished largely by starting new breeding groups under close supervision and control testing. Each colony, which is separated and well isolated from animals in other colonies of the same or different species, has been developed from a small number of animals and expanded by the selection of offspring. Histories of individual or family groups are available from cage and family records. Young animals for test purposes are sent to the laboratory stock quarters; none are returned to the breeding colonies. Animals that die are sent to the central laboratory for necropsy and bacteriologic examination.

SALMONELLA INFECTIONS

From 1931 to 1948, more than 6,000 necropsies were made of guinea pigs from seven breeding colonies. In 1934, Salmonella infection was found in 3 animals from one cage in one colony; in 1937, in 7 animals from two cages in another colony; and in 1940, from 8 animals from one cage in a third colony. While no classification of cultures was made, serologic tests with unabsorbed serums suggested that a single type was involved in each instance, and that the 1934 type was different from that in 1937 and in 1940. During the period from 1931 to 1948, 12 mouse-breeding colonies were also at the farm. In 1943, Salmonella organisms were demonstrated in mice that died in three boxes in one colony. Following destruction of the contacts and removal of those with close family relationships, no further evidence of the disease was found. It seems reasonable to assume that early recognition of the infection and measures taken to eliminate it were successful. Moreover, for eighteen years the infection had not been enzoötic in any of the seven guinea pig- or 12 mouse-breeding colonies. The origin of these sporadic outbreaks was not determined, but infected wild rodents and contaminated feed were suspected.

Guinea Pigs.—A different picture was presented in August, 1949, when explosive outbreaks of Salmonella infection occurred simultaneously in the two existing guinea pig colonies with a combined population of 3,000 animals. Salmonella-like microörganisms were recovered during the month from 20 necropsies from each colony. From August to December, 1950, microörganisms having the biological characters of Salmonella were recovered from necropsies of 81 guinea pigs from the two colonies. Twenty-four of these cultures and 13 from guinea pigs dying in the stock quarters were classified* according to the Kauffmann-White schema.[1] Thirty-four were *Salmonella newport*; the other 3 were in the rough phase and could not be typed. The average monthly death rates for the life periods of the two breeding colonies prior to the appearance of infection were 14.2 and 12.8 per thousand, respectively. The highest monthly death rate in the two colonies after the appearance of infection was not over 30 and occurred during the first month. The transition to an enzoötic state, as described by Smith and Nelson,[2] was evident in 1950 when monthly mortality rates dropped to a level well within the normal range. The *S. newport* infection in these two guinea pig colonies was not associated with a high mortality as has been observed in some other outbreaks of Salmonella infection.

Cultures from animals dying in the quarters are made on blood-agar plates from the lung and spleen, on Endo's medium from the spleen and gall bladder and, since January, 1950, in peptone tetrathionate medium from contents of the large intestine. Cultures in the latter medium are incubated for eighteen to twenty-four hours and streaked on plates of Endo's medium and bismuth sulfite agar.[3] In 21 per cent of 112 necropsies of infected guinea pigs during 1950, Salmonella or-

From the Division of Laboratories and Research, New York State Department of Health, Albany.

*I am indebted for the classification of strains to Miss Marion B. Coleman who is in charge of the World Health Organization Regional Salmonella Centre located in this Division.

ganisms were recovered from the intestinal tract only. Gross lesions in the liver and spleen, commonly observed in this disease, were found in a relatively small number. Four animals were destroyed because of periorbital abscesses and purulent conjunctivitis from which Salmonella were recovered.

Anticipating the loss of both of the colonies, preparations were made late in 1949 for a new colony. Sixty-two pregnant females were selected from runs in which no evidence of infection was observed and were placed in sterilized individual boxes in clean, isolated quarters. *Salmonella typhimurium* was recovered from 2 guinea pigs dying six and seven weeks after isolation. These were the only instances of the recovery of this microörganism from animals at the farm during the life of the existing colonies.

Mice.—Salmonella infection was not limited to guinea pig colonies. In November, 1949, *S. newport* was recovered from mice dying in the main mouse-breeding colony (2,400). Again, it appeared among unrelated families and was disseminated throughout the colony. This colony was located in an isolated section of the building housing one of the two infected guinea pig colonies and was separated from it by masonry partitions, a corridor, and screened and solid doors. Each of the colonies was attended by a different worker. Nevertheless, extension of the infection from the guinea pig colony was suspected and considered possible, although not probable. Control measures to prevent spread within the colony were abandoned and it was placed in quarantine.

During 1950, *S. typhimurium* was recovered from 2 mice in a small breeding colony at the laboratory and, in 1951, sporadic cases of *S. newport* infection were found in five additional small, isolated breeding colonies at the farm. In each instance, contacts and closely related families were removed.

Monkeys.—On March 28, 1951, stool specimens were collected from 8 of 12 monkeys received two weeks earlier in a debilitated condition. Four had died during shipment and all but 2 died later or were destroyed. Necropsy findings indicated an acute or chronic respiratory disease of undetermined origin. Stool specimens were collected when 6 of the 8 were showing evidence of enteritis and profuse diarrhea. *Salmonella newport* was recovered from the feces of 3 animals and later at necropsy from the intestines of a fourth. While we have no reliable information as to the origin or time of this infection, it is of interest that these monkeys had received as part of their ration a limited amount of the dog feed that had been supplied to the mouse colonies.

STUDY OF PREPARED FEEDS

In early 1951, it appeared that the usual procedures for eliminating or controlling Salmonella infections in the laboratory breeding colonies were not giving the results obtained in previous years. The possibility of contaminated feed was then investigated. Salmonella infections are not uncommon among wild rodents. Salthe and Krumwiede,[4] in 1924, described a classical outbreak of food poisoning due to *"Bacillus pestis caviae (Bacillus typhimurium* — mutton' type)" and traced the source to infected wild mice. Khalil,[5] in a survey of the incidence of microörganisms of the Salmonella group in wild rats and mice in Liverpool, found a high incidence of infection in rats during the first quarter and a low incidence in the third quarter of the year. He states that his failure to recover Salmonella organisms from wild mice might be because examinations were made during the third quarter. It may be presumed that fecal droppings from rodents in grain bins, or bodies of mice pressed in bales of hay, are a potential source of infection even though, in naturally selective habits, they are avoided by the feeding animal. When grains and hay are ground and mixed in a prepared feed, the animal is denied any possible protection from natural selection. The period of survival of Salmonella under such conditions may be longer than generally supposed, as pointed out by Jungherr.[6] Cherry, Scherago, and Weaver[7] recovered Salmonella organisms from retail meat products, with the highest percentage from pork liver. Reference is made to the previous finding of these microörganisms in the lymph glands of normal hogs. No mention is made of examination of meat scrap, such as is used in the preparation of some animal feeds. Kintner[8] states that Salmonella organisms are relatively common in substances that frequently contaminate the rations of dogs.

Since 1939, commercially prepared pelleted feed, mixed with whole grains or alone as a complete grain ration, has been given to guinea pigs and rabbits. The mouse diet has been dog feed or a similar product pressed into solid forms. These prepared feeds have been adaptable to the methods of feeding and their nutritive value, in terms of reproduction and growth, has been definitely better than that of whole grains. Previous to 1949, nearly all of these feeds were secured from two manufacturers. More recently, through competitive bidding as required by the purchasing policy of the state (N. Y.), feed prepared by other manu-

facturers has been supplied. That fed to guinea pigs was replaced at the time of the appearance of the infection in 1949 by feed from manufacturer "A." The mouse ration was supplied by the same manufacturer beginning in 1949 but before the appearance of the infection in mice. It was continued until the middle of 1951. Because of the more recent appearance of Salmonella infections among animals receiving dog feed, this feed was selected first for examination.

METHODS

Shipments of prepared feed were received in paper or burlap bags of 50 or 100 lb. each and stored immediately in a rodent-free room. Samples were obtained from each bag tested by cutting a small opening and, with forceps, removing two cubes to a sterile 7 in. by 1 in. tube. The forceps were sterilized before taking samples from different shipments but not between bags in the same shipment.

In early tests, one-half of the two-cube sample was placed in a jar containing approximately 12 ml. of peptone tetrathionate medium.[3] In later tests, the volume of tetrathionate medium was increased to 40 ml. and the whole of each two-cube sample was placed in it. After forty-eight hours' incubation, bismuth-sulfite-agar plates were streaked, incubated forty-eight hours, and examined for Salmonella-like colonies; fishings were made to lactose-glucose agar slants. Cultures with the characteristics of Salmonella were tested for indol production and biological reactions in brome cresol milk, glucose, lactose, sucrose, maltose, mannitol, and gelatin. Cultures giving typical reactions were submitted to the Salmonella-typing group for identification and classification.

RESULTS

On March 9, 1951, samples were collected from 31 bags of dog feed received two days previously and from ten bags received in February. *Salmonella newport* was recovered from samples from two bags received in March. The 31 bags received in March and four of the ten bags received in February were resampled and tested six days later. No Salmonella-like cultures were recovered from the second sampling of the March shipment; Salmonella organisms were recovered from one of the four bags and were identified as Group E of the Kauffmann classification, probably *Salmonella muenster*.

The findings led to a series of examinations of samples collected at the time of delivery from bags of dog feed and a similar mouse feed product and from guinea pig and rabbit pellets received from different manufacturers during April and May.

Examination of samples from 151 bags of dog feed received from manufacturer "A" showed the presence of *S. newport* in two and probably *S. muenster* in one, as mentioned. Examination of single samples taken at the time of delivery from 196 bags of mouse feed from manufacturer "B" showed the presence of *Salmonella minnesota* in two bags. In November, 1951, *Salmonella tennessee* was recovered from one of ten bags of dog feed received from a third manufacturer, "C."

Samples from 223 bags of rabbit and guinea pig feed in pellet form from two other manufacturers showed no microörganisms of the Salmonella group. Time and facilities did not permit the handling of an unlimited number of specimens. In most instances, a single specimen was taken from each bag. In view of the small sample, the possible irregular distribution that might occur in one mix, or even in a single bag, the number of bags that may actually have included contaminated material can not be estimated.

Through the coöperation of manufacturer "A," 171 samples were collected at the mill from unopened bags of ingredients used for the preparation of the feeds and also of the finished product from the pelleting machines at approximately one-bag intervals. Only those ingredients considered most likely to be contaminated were examined: meat scrap, wheat germ, cheese rind, and liver and fish meals. These had been stored in the mill for five days to two months. Specimens were taken by a standard bag sampler sterilized by live steam when sampling was commenced and between each lot of ingredients sampled. The finished products were collected from the pelleting machine by sterile forceps. All samples were placed in sterile jars or sterilized paper bags. Sufficient material was collected so that specimens from less than 25 bags could be divided to make two or three test samples approximately equal in amount to two cubes of dog feed. Each test sample was placed in 40 ml. of peptone tetrathionate medium and incubated for forty-eight hours. A heavy Proteus-like growth in cultures of the 50 per cent meat scrap may have had an inhibiting effect upon the growth of Salmonella, if present. Microorganisms with the biological characters of Salmonella were recovered from one sample of 60 per cent meat scrap and one sample of dog feed from the pelleting machine.

They were identified as *Salmonella senftenberg.*

SUMMARY

1) An explosive outbreak of infection with *Salmonella newport* occurred in two guinea pig colonies and later in mouse-breeding colonies. A search for the source of the infections led to the examination of prepared dry animal feeds supplied to the colonies.

2) Test samples of prepared dog feed showed the presence of *S. newport* in two bags and of *Salmonella muenster* in one from manufacturer "A"; of *Salmonella minnesota* in two prepared by manufacturer "B"; and of *Salmonella tennessee* in one from manufacturer "C."

3) Examinations were made of a limited number of samples collected at the mill of manufacturer "A" of dog feed, rabbit pellets, and six selected ingredients used in the manufacture of one or both. Cultures of *Salmonella senftenberg* were recovered from one specimen of 60 per cent meat scrap and from one sample of dog feed as delivered from the pelleting machine.

4) Examination of 223 samples of rabbit and guinea pig pellets in shipments delivered to this laboratory and of 25 samples collected at the mill of manufacturer "A" did not reveal the presence of Salmonella.

5) This is believed to be the first report of the recovery of viable Salmonella from prepared dog feeds. *Salmonella newport* and other Salmonella organisms were recovered from dog feed supplied to mouse-breeding colonies at the time of unexplained outbreaks of *S. newport* infections in these colonies. Because of the extensive and increasing use of these feeds for laboratory animals, the findings are significant, particularly for those maintaining colonies of mice and other animals highly susceptible to this infection.

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A Modern Stomach Tube

A metal-tipped tube which can be directed by a magnet has been devised for the release of gas or fluid accumulated in the intestines. By watching through the fluoroscope and by moving the magnet, a surgeon can guide the tube through the stomach and around the curves in the intestine. To avoid the tube being blocked, by sucking the wall of the intestine into this opening, an inner tube which acts as an air vent has been installed. Suction of either fluid or gas can thus be effected.—*Science News Letter, June 21, 1952.*

Stilbestrol Injections.—Stilbestrol, when implanted in feeding lambs, increased their rate of gain by 50 per cent and cut the cost of feed by 30 per cent. This was recorded by a Minnesota experiment station. In a similar experiment in Iowa, where a higher corn ration was used, stilbestrol injections increased the rate of gain by only 5 per cent and saved 5 per cent of the feed required to produce a pound of gain. Stilbestrol stimulated growth so that the lambs finished more slowly and dressed lower than the control groups.—*Country Gentleman, June, 1952: 45.*

A new scourable branding paint for marking sheep, which can be removed when processing the wool, is on the market. It was developed in the PMA Denver Wool Laboratory and is available in red, green, and black.—*University of Nevada, Agricultural Extension Service.*

An Epizootic of Hepatitis in the Dog

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THE PURPOSE of this article is to report the occurrence of an epizoötic of hepatitis of undetermined etiology among dogs and to record observations on the pathology of the cases that were studied.

Epizoötiological Data.—Available information on the duration and extent of the outbreak was compiled from 31 cases that were obtained for pathological examination. The disease entity was first observed in November, 1951, when 3 cases were encountered. Three more cases were seen in December but only 1 case in January, 1952. The peak incidence of the disease apparently occurred in February when 16 cases were received for examination. Six cases were seen in March and 2 in April. Definite histopathological diagnosis of the disease was made in dogs that originated in Alabama, Florida, and South Carolina. Information obtained from veterinary practitioners indicates that the same condition also occurred among dogs in Georgia, Tennessee, and Mississippi.

Clinical Observations.—Data from the clinical records of cases received for postmortem examination indicate that the disease is characterized by anorexia, icteric discoloration of visible mucous membranes, and a loss of vigor described by such terms as "listlessness," "dullness," "sluggishness," "weakness," and "prostration." Often, but not invariably, mention was made of blood in the feces and that the dog appeared anemic. Four animals had vomited during the period of clinical observation; 2 of them vomited blood. Two dogs had petechial hemorrhages in the gums; another showed a bloody discharge from the nose. One dog died in convulsions.

The period of noticeable illness was variable. In a few instances, there were such notations on the records as "sudden collapse," "found dead," or "O.K. last night—found down this morning—died shortly after." One affected dog died suddenly while running in a field trial without any illness having been noticed by the owner. In most instances, however, the noticeable period of illness ranged from two to fourteen days, the average being about five days. Judging from the subacute character of the hepatic alterations found subsequently in most of these cases, the impression is gained that the duration of the clinical symptoms is not an accurate indication of the length of time a dog was affected. It appears that some dogs were affected with the disease a week, two weeks, or even longer before clinical symptoms were noticed.

A few chronic cases were observed; these had a history of being ill one or two months before death. Icterus, ascites, and loss of weight were the most prominent symptoms. In 1 chronic case, edema of the legs developed.

Temperature recordings of affected animals usually were within the normal range or subnormal. A variety of clinical laboratory tests were made on selected dogs, but sufficient data are not available to establish any averages or characteristic patterns of the disease. Blood urea nitrogen was markedly elevated in 1 of 6 dogs on which this test was made. Of 2 dogs given the bromsulfalein dye test, 1 showed 40 per cent dye retention, the other none. In another dog with the disease, a cholesterol determination showed 77 mg. of cholesterol per 100 cc. of blood of which 41 mg. was cholesterol ester. A cephalin-cholesterol flocculation test on the same dog resulted in 2-plus flocculation. Only one icteric index determination was made, and it was high (60), as would be expected. A van den Bergh determination on the serum of another case showed 2.25 mg. of "direct" bilirubin per 100 cc. of blood. White blood cell counts made on 6 dogs showed a varia-

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tion from 10,950 to 31,350 per cubic millimeter.

Pathological Observations.—The disease proved to be a distinct type of hepatitis but not all the cases observed were in the same stage of development. Twenty of the affected dogs died at a subacute stage of the disease; in 6 the lesions appeared more acute, and in 5 they were chronic. The postmortem and histopathological alterations were sufficiently distinctive in the subacute cases to conclude that the disease was a definite entity. The characteristic pathological alterations were as follows:

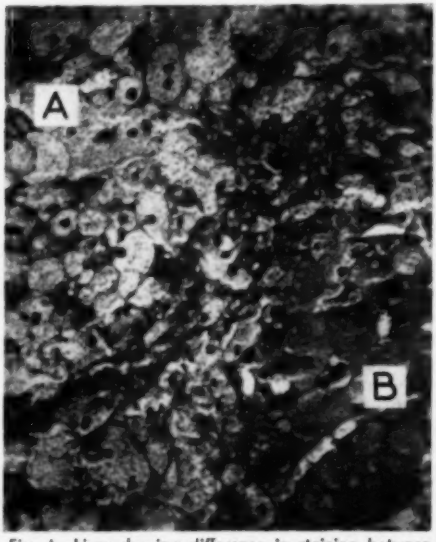

Fig. 1—Liver showing difference in staining between damaged parenchyma (A) and regenerating parenchyma (B). Bile duct proliferation is seen in center. x 253.

Postmortem Examination.—There was a moderate to marked degree of icterus in all cases examined. The icteric discoloration was most apparent in the conjunctiva, oral mucosa, esophageal mucosa, aorta, serous membranes, and body fat. Discoloration of the liver was also a consistent and prominent sign of the disease. The affected livers were either yellow, reddish yellow, orange-yellow, or greenish yellow in color. On close inspection of the liver, a fine uniform reddish mottling could sometimes be seen, similar but not as pronounced as the mottling of a "nutmeg" liver. There was subserous edema around the gall bladder in some but not all of the cases. A large percentage of dogs in the subacute stage of the disease had more free blood in the lumen of the intestine than usual for the number of hookworms that were present. In some instances, the intestinal lumen was filled with blood. It appeared that damage of the liver had increased the rate of hemorrhage from these parasites, probably because of decreased coagulability of the blood. Such cases also showed petechial and ecchymotic hemorrhages in various places such as the gastrointestinal mucosa, lungs, costal pleural, epicardium, and urinary bladder. In a few cases, the kidneys were swollen and showed some degree of icteric discoloration.

Histopathological Examination.—The characteristic histopathological picture of the subacute case was a combination of damaged parenchyma, regenerating parenchyma, and proliferation of the bile ducts. There was marked diffuse degeneration of the parenchyma. The cytoplasm of the damaged hepatic cells had a rarefied appearance and stained less intensely than normal (fig. 1). More often than not, fatty change was associated with the degenerative process as indicated by the presence of small- to medium-sized vacuoles in the cytoplasm of the damaged cells. The nuclei

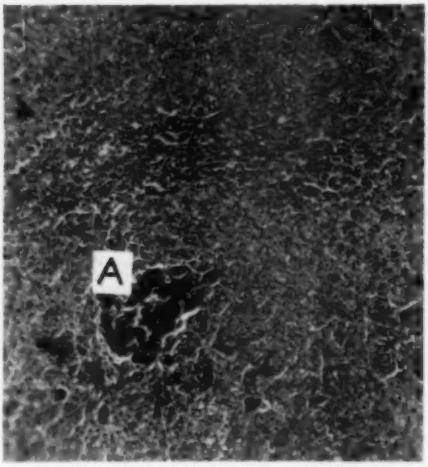

Fig. 2—Liver showing focus of regenerating parenchyma (A) at periphery of lobule. x 92.

were somewhat shrunken, irregular in outline, and stained diffusely. The nuclear details were indistinct. None of the cases examined showed intranuclear inclusions of the type characteristic of infectious canine hepatitis. Scattered about in the cords of degenerating parenchyma there were individual liver cells and small foci of liver cells that were becoming necrotic. In many of the cases, loss of parenchyma and hemorrhage had also occurred in the central area of the hepatic lobules. The bile canaliculi in some of the columns of degenerating liver cells were dilated and filled with inspissated bile.

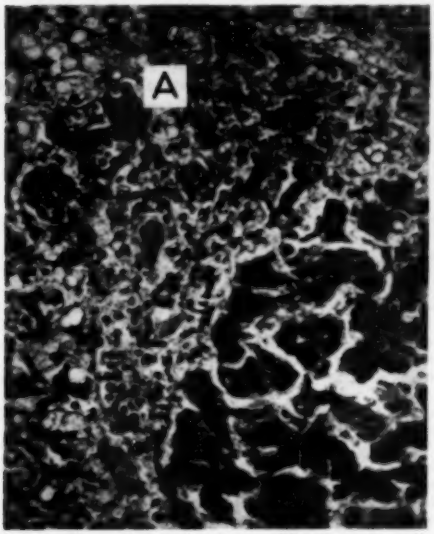

Fig. 3—Liver section showing proliferation of small bile ducts in area marked A. The dark-staining hepatic cells are regenerating parenchyma. x 253.

Some regeneration of the hepatic parenchyma was seen in all of the subacute cases examined, although apparently not enough to prevent the death of the animal. It varied in amount and was seen in the sections as small foci or less definitely outlined areas of newly formed hepatic cells at the periphery of the lobules (fig. 2). The regenerating cells were irregular in size; some of them were large, and some contained two nuclei. The cytoplasm was more dense than that of the degenerating cells and had more affinity for stain. However, even the regenerating parenchyma showed some fatty change as indicated by the presence of cytoplasmic vacuoles in some of these cells.

Bile duct proliferation was a prominent

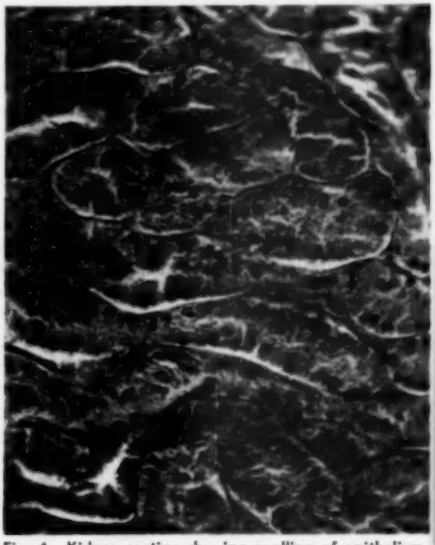

Fig. 4—Kidney section showing swelling of epithelium of the convoluted tubules. x 253.

and characteristic feature of all the subacute cases examined (fig. 3). The small septal or perilobular bile ducts were the structures involved. The proliferation of these ducts apparently began at the periphery of the lobules but, in many of the cases examined, newly formed bile ducts had invaded the hepatic lobules to such an extent as to distort the normal architecture of the liver. The large interlobular bile ducts showed no evidence of proliferation. As a rule, they were dilated and filled with a basophilic coagulum.

The area around the central veins and hepatic veins showed moderate infiltration with lymphocytes and plasma cells. Often these vessels contained a number of macrophages filled with brown pigment.

In most of the subacute cases, the kidneys showed distinctive and characteristic histopathological alterations. In one segment of the proximal convoluted tubules, the epithelial cells were swollen to such an extent as virtually to occlude the lumen

(fig. 4). Deposits of bile pigment were present in some of the swollen cells. Occasional bile pigment casts also were seen. No significant or characteristic cellular infiltrations were found in the kidneys examined. The changes observed may be considered as a manifestation of a bile nephrosis.

Five of the cases examined were classified as chronic on the basis of the clinical, postmortem, and histopathological observations. As stated previously under clinical observations, these dogs were known to be ill one or two months before death and may have been affected longer than the clinical history indicates. Postmortem examination revealed an icteric carcass, ascites (as a rule), and a somewhat shrunken yellowish brown or tan liver studded with numerous small, brownish nodules. In these cases, there was less tendency to hemorrhage than noted in the subacute cases. Histopathological examination of the liver revealed the same basic changes characteristic of the subacute cases; however, the condition had advanced to complete destruction of the normal hepatic architecture. The brownish nodules throughout the liver proved to be large islands of regenerating hepatic parenchyma. Among these nodules, there was a confused mixture of degenerated liver cells, newly formed bile ducts, hepatic vessels, and depleted hepatic stroma filled with blood. Real or apparent fibrosis was noted in some of the cases. The relation of these cases to the diffuse nodular cirrhosis in old dogs described by Runnells[1] was not determined.

In another 6 cases of this series, the hepatitis was classified as acute on the basis of

TABLE I—Animal Inoculations

Animal			Exposure					
No.	Age	Sex	Tissues	Route	Amount	Source	Date	Termination
EXPERIMENT A:								
1	1 wk.	F	Liver	Subcut.	2 ml.	Heath*	2/18	Died 2/21; negative bacteriologically; no significant pathological alterations.
2	1 wk.	M	Liver	I.P.	1 ml.	Heath	2/18	Died 2/21; negative bacteriologically; no significant pathological alterations.
3	1 wk.	F	Liver Blood**	Subcut. Subcut.	2 ml. 1 ml.	Fuller (subacute)	2/18	Died 2/23; abscess site inoculation; hemolytic Staphylococcus aureus recovered from heart and spleen.
4	1 wk.	M	Liver	I.P.	1 ml.	Fuller (subacute)	2/18	Died 2/22; negative bacteriologically; no significant pathological alterations.
5	Mature	F	Liver	I.P.	20 ml.	Heath*	2/18	Killed 4/26; no significant pathological alterations.
6	Mature	M	Liver Blood**	I.P. I.P.	15 ml. 5 ml.	Fuller (subacute)	2/18	Killed 4/26; no significant pathological alterations.
EXPERIMENT B:								
1	6 wk.	F	Liver & kidney	I.P. Per os	10 ml.	Bruce #2 (acute)	2/22	Killed 5/24; slight bile duct proliferation; some necrosis around central vein.
3	6 wk.	M	Liver & kidney	I.P. Per os Subcut.	5 ml. 5 ml.	Bruce #2 (acute)	2/22	Killed 5/9; slight but definite bile duct proliferation.
2	6 wk.	M	Liver	I.P.	10 ml.	Fuller (2/22) (subacute)	2/22	Killed 5/9; slight but definite bile duct proliferation.
4	6 wk.	F	Liver	I.P. Subcut.	5 ml. 5 ml.	Fuller (2/22) (subacute)	2/22	Killed 5/24; no significant pathological alterations.
5	8 wk.	F	Liver & kidney	I.P. Subcut.	5 ml. 5 ml.	Teddar #1 (subacute)	2/23	Killed 5/24; no significant pathological alterations.
6	8 wk.	M	Liver & kidney	I.P. Subcut.	5 ml. 5 ml.	Garrett (2/22) (chronic)	2/23	Killed 5/20; no significant pathological alterations.
7	8 wk.	F	Urine	Intra-ocular	0.2 ml.	Morrow (chronic)	2/28	Eye removed 8th day; no inclusion bodies found in paraffin sections; killed 5/9; only a suggestion of bile duct proliferation.
8	8 wk.	M	Liver†, Kidney, Brain, Spleen, L. node	I.P. Subcut.	10 ml. 5 ml.	Mask (subacute)	2/29	Killed 5/20, no significant pathological alterations.

*Received frozen; no sections made. **Composite blood sample taken from several sick animals on 2/13; frozen. †Material treated with penicillin and streptomycin before injection. I.P. = intraperitoneal.

histopathological differences from the subacute cases rather than any essential differences noticed on clinical or postmortem examination. Three of the acute cases showed changes in the liver which, although similar to those seen in the subacute cases, differed in degree. There was extensive degeneration of the parenchyma, but the amount of hepatocellular regeneration and of bile duct proliferation were less than seen in the subacute cases. It appeared, histologically, that these dogs had been affected more severely and for a shorter period of time with the same type of hepatitis seen in the subacute cases. The other 3 acute cases showed only extensive degeneration and necrosis of the hepatic parenchyma; no regeneration of the parenchyma nor bile duct proliferation was seen. A particularly careful search for intranuclear inclusions was made in all tissues examined, but none was found. Consequently, these cases were classified tentatively as acute examples of the hepatitis described in this article. Material from these 3 dogs was not used in the transmission experiments.

Transmission and Animal Inoculation Studies.—At the peak of the epizoötic, 14 dogs of different age groups and 5 guinea pigs were inoculated with tissue suspensions or excretions from 8 different cases. For both dog and guinea pig inoculation, all tissues were ground in a Waring blendor in Tyrode's solution. When the tissue suspension was not injected immediately after preparation, it was refrigerated at approximately 4 C. until the injection was made. In no instance was the inoculum held more than twenty-four hours. The suspensions were centrifuged briefly at 1,000 to 1,200 r.p.m. to remove the heavy particles immediately before the injections were made. The material from the Mask dog (table 1) was mixed with antibiotics to reduce the bacterial population. To 40 ml. of the suspension there were added 10,000 μg. of streptomycin, 150,000 units of procaine penicillin G, and 100,000 units of potassium penicillin G. This stood for thirty minutes with intermittent agitation before the injection was made. Table 1 shows the results of these experiments. The only dogs available at the time experiment A was begun were pound dogs. Two mature dogs of unknown age and 4 suckling puppies were employed. The puppies were allowed to continue nursing their mother. The mature animals (dogs 5 and 6) showed a slight increase in temperature after the injection, but this rapidly returned to normal, and no evidence of illness was noted during the period of observation. When these dogs were killed about nine weeks later, no significant pathological alterations were observed.

Although the 4 suckling puppies died within three to five days after the injection, there was no evidence that their death was due to hepatitis. One of them (dog 3) apparently died from a bacterial infection, and the death of the others may have been the result of a shock reaction.

For experiment B, 8 hounds 6 to 8 weeks of age were obtained at, or shortly after weaning. Dogs 1 to 4 were of one litter and 5 to 8 of another. Except for the material which was injected into dogs 7 and 8, no attempt was made to reduce the bacterial content. However, in all instances care was taken to keep bacterial contamination at a minimum by the use of sterile instruments, containers, and diluent. Dogs 3 and 4 of this experiment developed abscesses at the site of the subcutaneous inoculation. These were drained, and the dogs were given penicillin and dihydrostreptomycin. Aside from the reaction following abscess formation, there was no evidence of illness in any of these dogs.

On March 7, dogs 3, 4, and 7 each received 10 ml. of canine distemper antiserum. All the dogs were treated twice for internal parasites—once with anthol (Jen-Sal) and once with tetrachlorethylene.

On autopsy, the livers of dogs 2 and 3 were pale, somewhat rough on the surface, and mottled throughout the parenchyma. Histologically, each of these showed slight but definite bile duct proliferation. Grossly, the liver of dog 7 appeared normal. There was only a suggestion of bile duct proliferation on histological examination.

The liver of dog 1 showed distinct mottling on the capsular surface and especially on the cut surface. This liver was much paler than those from dogs 4 and 5 autopsied the same day. That of dog 4 showed very faint mottling on the cut surface, but the liver of dog 5 appeared to be normal. Histologically, the liver of dog 1 showed slight but definite bile duct proliferation with some necrosis around the central veins. No significant pathological alterations were present in sections of the livers of dogs 4 and 5.

In addition to the dog inoculations, several guinea pigs were inoculated in an effort to recover Leptospira which might be present. Two young guinea pigs were inoculated intraperitoneally with a suspension of kidney tissue from Bruce dog 2, 2 from the Mask dog, and 1 from the Garrett dog (2/22). The weights of these guinea pigs were checked daily for ten to fourteen days, with no evidence of infection in any of them.

DISCUSSION

The characteristic pattern of clinical symptoms, gross lesions, and histopathological alterations seen in these cases leaves no doubt that an epizoötic of a specific type of hepatitis in dogs has been observed. The disease is differentiated from infectious canine hepatitis[3] by the consistent occurrence of jaundice in the affected animals, the absence of fever and leukopenia, and

finally by the consistent failure to demonstrate intranuclear inclusions in the tissues of any of the cases examined. Furthermore, the characteristic histopathological picture of the liver in these cases differs markedly from that seen in either infectious canine hepatitis or leptospirosis.

Attempts to transmit the disease by inoculation of material from 8 affected dogs into a total of 14 experimental dogs failed to produce the characteristic clinical and pathological picture of the disease in any of the inoculated animals. However, 3 of the experimental animals showed a pale mottled liver when they were destroyed seventy-seven days (2 dogs) and ninety-two days (1 dog) after inoculation. Histological examination of these livers revealed definite small bile duct proliferation in all and slight central necrosis in one. This could mean that a subclinical form of the disease had been transmitted to 3 of the experimental dogs. On the other hand, the possibility of exposure to the virus of infectious canine hepatitis either before or during the transmission tests can not be ruled out in the case of these dogs. It appears that further transmission experiments in dogs kept in a disease-free environment are needed before conclusions can be drawn on the transmissibility of the disease.

SUMMARY AND CONCLUSIONS

An epizoötic of a specific type of hepatitis of undetermined etiology occurred among dogs in the Southeast during the winter of 1951-1952.

A description of the disease is given on the basis of studies made on 31 cases. The character of the affection varied from acute or subacute to chronic; most of the cases studied succumbed at a subacute stage of the disease. The characteristic clinical symptoms of subacute cases were anorexia, loss of vigor, and icterus with absence of fever. Postmortem examination revealed icterus, different shades of yellowish, reddish yellow, or greenish yellow discoloration of the liver, and hemorrhage in various tissues and into the gastrointestinal lumen. Histopathological examination of the liver revealed a combination of damaged parenchyma, regenerating parenchyma, and proliferation of the small bile ducts.

The results of a limited number of animal inoculation tests with material from affected dogs failed to warrant conclusions on the transmissibility of the disease.

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Rabbits given a series of small intravenous injections of *Erysipelothrix rhusiopathiae* developed arthritis, usually in the carpus or shoulder joints, in six to twenty-three days.—*J. Path. Bact., 63, in Vet. Bull., April, 1952.*

Selenium Toxicity in Ireland

What is diagnosed as selenium poisoning is reported in cattle and horses in Ireland. Cattle lose condition, move stiffly, and may kneel when grazing but the most characteristic symptoms are loss of hair and alteration in the hoof growth. Normal levels of phosphorus, calcium, magnesium, and copper were found in the blood. The selenium content of the soil in the area was 30 to 324 p.p.m. compared to a normal of 2 p.p.m., and the herbage contained 150 to 500 p.p.m. compared to a normal 1 p.p.m.—*Vet. Bull., 22, (Feb., 1952): 96.*

A New Breed of Sheep.—The Targhee, a new breed of sheep developed at the U. S. Experiment Station, Dubois, Idaho, is the second new breed developed by the U.S.D.A. for the western ranges. Producing a high quality wool, this breed has a compact body and is adapted to rugged conditions. It has a white face free of wool, a skin free of wrinkles, and shears about 11 lb. of wool. It has been developed since 1926, by crossing, to get ¾ Rambouillet and ¼ Corriedale x Lincoln blood then interbreeding and selecting.—*The Sheep Breeder, July, 1952.*

Veterinary Pathologists to Hold Examination

The American College of Veterinary Pathologists will hold an examination for certification in the specialty of veterinary pathology at Chicago, Ill., on Nov. 28, 1952. Application forms can be obtained from Dr. W. T. S. Thorp, National Institutes of Health, Bethesda, Md. These must be returned by Oct. 10, 1952.

NUTRITION

New Developments in Swine Nutrition

Much is said about the heavy loss in young pigs between farrowing and weaning time. Also much thought, time, and effort has been devoted to attempts to do something about this loss but, obviously, the results have not been encouraging. One reason for this has been the difficulty of treating little pigs. Anyone wise to the ways of a pig knows what a problem it is to give them medication or nutrients in any way except with a hypodermic syringe, and unless repeated regularly such treatments are of temporary value.

Many times the only solution has been to wean the pigs so medication could be force-fed to them. However, that usually meant slower growth because no satisfactory substitute for sow's milk was available. Apparently, some elements in a sow's milk were lacking in available rations for baby pigs. In recent months, two developments have occurred which could revolutionize baby pig losses.

The first has sometimes been referred to as milk replacers—synthetic ration formulas on which baby pigs gain as fast, or even faster, than when on their mother's milk alone. These rations can be fed as a supplement to the sow's milk, or the pigs can be weaned when a few days old, after getting their mother's colostrum, and raised on the formula. If the formula contains the proper ingredients, it presumably could prevent the usual anemia tendency of young pigs and perhaps much of the diarrhea which often hampers them. If fed only as a supplement, pigs might eat so little of it, until about 10 days old, that some anemia and scouring might have already developed.

The second development is a pellet containing a growth-stimulating antibiotic which can be implanted subcutaneously for slow continuous absorption. If the antibiotic can also overcome the scours which frequently affect baby pigs or can stimulate their resistance against other infections, it will indeed be of great value. Still needed is an additional pellet that will protect against the customary pig anemia.

A third development is not so new but is being perfected for use in older pigs. Persuading weanling pigs to eat needed ingredients is not difficult. The problem is simply one of economics—to provide the mineral, vitamin, antibiotic, and other supplemented materials in an effective formula which, at a reasonable price, will supplement but not replace the cheaper home-raised feeds.

These developments may perhaps point the way to further discoveries and more effective means of reducing the present 35 to 40 per cent loss of pigs between birth and marketing age. Their progress will be watched with great interest by all consumers, as well as by those directly interested in the swine industry.

For sixty days, lactating Holstein-Friesian cows were given a daily supplement of 130 mg. of aureomycin, 130 mg. of tyrothricin, or 0.83 mg. of vitamin B_{12}, or they were given no supplement at all. If antibiotics were coming into the milk at all, the concentration was so low that there was no interference with curd formation.—*Louisiana Agric. Exper. Sta.*

Urea, when fed to ruminants, is known to be useful as a substitute for part of the dietary protein. Bacterial action in the rumen utilizes the urea nitrogen in the synthesis of some amino acids. However, without sulfur the amino acids, methionine and cystine, can not be produced. Recently, it has been demonstrated that if the diet includes some inorganic sulfates, these sulfur-containing amino acids can be synthesized. Lambs grew well on such a diet, with no other source of nitrogen.—*Borden's Rev. Nutr. Res., Jan., 1952.*

EDITORIAL

A Challenge to Veterinary Science

With justifiable pride we, in the profession, often contemplate the position of trust that veterinary medicine has attained as a unit in the economy of the nation and of the world. With our many new schools and the more thorough training the students are receiving, we anticipate even finer attainments. We believe our profession is prepared to meet greater challenges than ever before. At least, we hope that this is true because events seem to indicate that serious challenges are bearing down upon us.

While we may seldom take time to spell it out we, as a profession, realize that our first responsibility is to the general welfare of our fellow man. We are dedicated to help maintain his supply of foods of animal origin. We strive to protect him from infection from animal diseases. And we attempt to ease his anxieties by helping to care for his animal friends.

In past decades, our profession has played a leading role in the battle against the contagious diseases which have often threatened man's food supply. We helped eradicate pleuropneumonia, tick fever, and foot-and-mouth disease in cattle; also glanders and dourine when the equine species was still an essential unit in the agricultural industry.

We have more or less effectively controlled such contagious diseases as tuberculosis, anthrax, black leg, pullorum disease, hog cholera, equine encephalomyelitis, and sore mouth in sheep. We seem to be making encouraging progress against brucellosis, Newcastle disease, and fowlpox.

However, no sooner do we seem to conquer one contagious disease than another or, as it often seems, several others appear in our midst to take its place. Thus, we are conditioned to almost constant new challenges.

Events often seem to occur in waves or cycles. Perhaps we are now at the peak of such a cycle which soon may recede but, definitely, the livestock industry has seldom been faced with as great an assortment of threatening contagious diseases as it is at the present time. These diseases have been on the increase during the past two or three years. Not all are new diseases but those that are not new have at least developed some new aspects.

In recent years, leptospirosis has become a major threat to the bovine species and perhaps also to swine and other species. More has been reported on its incidence in dairy cattle in the eastern states but perhaps its greatest toll, often undiagnosed, has been taken in midwestern states. There, feeder cattle as well as dairy cattle and calves have been affected in considerable numbers in the past year or two. Few official reports are available but leptospirosis is known to have been diagnosed in cattle in at least six midwestern states. While the mortality seems not to be extremely high, except perhaps in calves, the economic loss from reduced flesh and milk production is great. Positive reactions to blood tests continue to indicate that many animals have apparently had unrecognized mild cases and probably remain potent spreaders of the infection. No treatment with proved merit has yet been reported for bovine cases.

Probably the greatest loss to cattle feeders in the past two years has come from shipping fever. Although not a new invader, it seemed to have acquired a new virulence in the fall of 1950 and has taken a huge toll since then. However, unlike leptospirosis, it responds, sometimes almost miraculously, to treatment with certain sulfonamides and even more so to several of the newer antibiotics.

Other threats to the bovine species come from the gradual infiltration of anaplasmosis into the northern states, from a rather alarming wave of anthrax in recent months, and of course from the presence of foot-and-mouth disease just across the border to our north.

The swine industry also is faced with an unusual galaxy of contagious diseases. Atrophic rhinitis, while neither very new

nor highly contagious, has insidiously spread until it is causing a huge economic loss, not from deaths but from its stunting effect. It apparently responds to no treatment.

The very unusual enzoötics of anthrax in swine in recent months have been the cause of very real concern. Apparently caused by spore-contaminated feed, the disease seems not to have spread from affected herds. The affected animals seem to respond well to treatment with penicillin or other antibiotics.

The alarmingly rapid spread this summer, from coast to coast, of *vesicular exanthema* in swine illustrates the need for an ever alert inspection and quarantine service. This disease resembles foot-and-mouth disease but does not affect ruminants. Had this epizoötic proved to be true *aftosa*, our entire livestock industry would have been seriously curtailed and the cost of eradicating it would have been stupendous. The cost of eradicating vesicular exanthema alone may be very great.

Also of great concern at present, at least to some practitioners, are the primarily nervous disease or diseases of swine which have taken a considerable toll during the past two years. Occurring over a widespread area and apparently yet undiagnosed they (or it) are suspected of being due to a virus but may prove not to be infectious. Treatment is as uncertain as is the cause. Much has also been said about so-called edema disease of swine but little is known about it except that it seems not to be contagious.

The poultry industry also has a new threat in the recent appearance in our eastern states of air sac disease. The states involved are making a concerted effort to control it.

Less new than these diseases, but nevertheless a cause for genuine concern, is the constant gradual spread of rabies. Because of the great threat to all species, including man, the seriousness of this development can not be minimized. It is high time for an area-wide crusade to be organized and vigorously prosecuted until rabies has been completely stamped out. For too long it has been considered as a local problem, or as a series of local problems, and insufficient concerted effort has been made to eradicate it.

Several of the named diseases are communicable to man so their control is of concern not only to the livestock owners and veterinarians but to everyone. The incidence of other infectious diseases may vary considerably but at present they seem to pose no major threat to our food-producing animals.

While these changes have been occurring in the area of infectious diseases, other types of disease have not been static. Chemical poisoning seldom, if ever, has caused such high mortality in cattle as has the trichloroethylene-extracted soybean oil meal the past few years. With the cause finally fully exposed, the production of this poisonous form of soybean meal doubtless will be discontinued.

Another chronic poisoning may have been solved by the recent discovery that chlorinated naphthalenes are capable of causing x disease (hyperkeratosis) in cattle. Thus, we may soon be able to avoid another disease which not too long ago caused great concern. Others of the many new chemicals used in the battle against pests, from germs to weeds, may prove poisonous either *per se* or by causing further chemical changes as in treated plants. Still another potent source of poisoning is indicated by the recent identification of the antibiotic chloromycetin (chloramphenicol) as the cause of several fatal cases of aplastic anemia in man. It has not yet been suspected of poisoning animals.

In the field of livestock parasitic infestation, the new developments in various parasiticides have given us improved tools to work with, but there is still a question of who is winning some of these age-old battles. However, at present we are unaware of any new major threats from livestock parasites.

In summarizing, may we say that it is not our purpose to be alarmists but the discovery of these new types of poisons and the definite upsurge of so many serious old and new contagious diseases of livestock, some of which are communicable to man, should be of concern to all of us. Knowing the enemy, let us be prepared.

Watching the Calendar

Does history repeat itself? Who hasn't smiled at the old yarns about diagnosing "wolf in the tail" or "hollow horn," or at the idea that keeping a goat with a herd

of cattle or sheep would ward off disease? Now in this year of 1952 comes a cattlemen's pocket-size journal with the following "remedies":

> For warts—cut two joints from the end of the animal's tail. Warts as big as a hat will be gone in a month.
>
> For fistula—cut off two joints from the tail of the horse.
>
> For distemper—build a fire of old trash and rags and make the horse inhale it. Jerk the sack off the animal's head occasionally so it won't choke.

Has medical science passed somebody by, or do they just have a profound sense of humor?

For Decentralization of the U.S.D.A.

An editorial in *Hoard's Dairyman* (June 10, 1952) advocates decentralization of the U. S. Department of Agriculture. The editorial states, "It would not displease us if all of the research, extension, and regulatory activities of the Department were moved to the country."

The U.S.D.A is lauded for the services performed and commended for being relatively free from politics in the past The greater attention given to political considerations recently is viewed with some alarm, especially if allowed to continue.

Lamenting the "Washington" environment in which the Department is located and recognizing a general feeling of frustration arising out of its magnitude and the accompanying bureaucracy, the difficulty in maintaining the morale of personnel is pointed out. There is, in the opinion of the editorial writer, a different atmosphere at the state agricultural experiment stations, where more emphasis is placed on subject matter and services and less on legislative and political activities.

We believe that the suggestion made by *Hoard's Dairyman* has real merit and urge serious consideration of it. Everything possible should be done to rid the Department of political influences which are detrimental to the basic functions and services that have made it of such great benefit (in a nonpolitical sense) to agriculture in the past. We have witnessed the "old line" agencies, such as the Bureau of Animal Industry, for example, one of the Department's outstanding bureaus, service-wise, since its inception, relegated to a place of secondary importance in relation to newer "give away" agencies with obviously political functions.

That these newer agencies have been greatly favored in recent years is common knowledge, but at what cost in impaired morale and efficiency to the nonpolitical service bureaus and at what cost to certain segments of our agricultural and livestock economy is not known.

If moving some of the research and service agencies of the U.S.D.A. away from Washington will overcome this condition, we strongly favor decentralization.

The National Committee on Insurance

The Association has received letters from several members about the National Committee on Insurance, Box 872, Evanston, Ill., inquiring if the plan of accident and sickness insurance for veterinarians offered by the committee has been approved by the AVMA. There is some confusion, apparently, since the program is offered by a national committee.

To clarify the situation, the AVMA Board of Governors has authorized the following statement*:

> **The insurance plan offered by the National Committee on Insurance has not been approved and is not sponsored by the American Veterinary Medical Association. A plan substantially the same was proposed to the Executive Board at its meeting in August, 1951, and was referred to the Executive Committee of the House of Representatives "for their consideration and referral to the constituent associations to determine the desire for a health and accident insurance policy for AVMA members in the various states."**
>
> **The Executive Committee of the House discussed the matter at the Milwaukee session and reported back that "it was unanimously decided that this proposal be referred to the constituent associations for their investigation and individual action." This report was approved by the House along with other matters included in the Executive Committee's report (see 1952 "Proceedings Book," p. 416).**

*The Executive Board also approved the statement and the House of Representatives voted at the Atlantic City session to have copies of it sent to the secretaries of constituent associations.

CURRENT LITERATURE

ABSTRACTS

Improved Antigen for Anaplasmosis Tests

Antigens were prepared from the blood of 4 splenectomized calves which had been inoculated with *Anaplasma marginale* (Louisiana strain 3272). They were prepared by lysing the parasitized cells in ice cold distilled water, centrifuging this material at a speed of not less than 5,000 r.p.m., and then removing a layer of extraneous material, which was formed following trituration of the sediment, and recentrifugation. A comparison of the results obtained from the titration of these antigens and antigens prepared by the method of Mott and Gates (*Vet. Med., 44,* (1949): 296) from blood obtained at the same time showed that antigens prepared by high speed centrifugation methods were superior. This superiority was due to the removal of a greater amount of extraneous material which resulted in an increased concentration of parasites and a decreased anticomplementary activity. A comparable yield of antigen was obtained by the high-speed centrifugation method. —[*Kenneth E. Price, Leo J. Poelma, and John E. Faber: Preparation of an Improved Antigen for Anaplasmosis Complement-Fixation Tests. Am. J. Vet. Res., 13, (April, 1952): 149-151.*]

An Encephalitic Strain of Hog Cholera Virus

Investigations of postvaccination losses in Michigan resulted in the isolation of a strain of hog cholera virus having unusual characteristics. This virus produced a disease in swine in which 42.3 per cent of the animals inoculated intracranially and 52.2 per cent of those inoculated subcutaneously exhibited encephalitic symptoms in the form of convulsions or severe nervous reactions. These characteristics were maintained through 16 intracranial passages. Temperatures of animals usually reached 105.0 F. or higher in twenty-four to seventy-two hours following inoculation with the virus. The short incubation period was further emphasized by the rapid drop of total white blood cell counts during the 24- to 72-hour period following inoculation.

The course of the disease was short with deaths sometimes occurring as early as three to five days from the day of infection. There were no recoveries among 100 animals not receiving protective serum. Bureau of Animal Industry experimental hog cholera antiserum did not give adequate protection when injected in federal regulation test doses.

The histopathological examination of the lesions of the brain revealed that proliferative changes occurred in the thalamus in 100 per cent of the cases. In other organs, hydropic degeneration and proliferation of the vascular endothelium appeared to precede or accompany hemorrhage or infarction.

No pathogenic bacteria other than *Pseudomonas aeruginosa* were isolated from the brain, blood, or intestine. This organism was isolated from 5 cases.—[*H. W. Dunne, E. M. Smith, R. A. Runnells, H. J. Stafseth, and F. Thorp, Jr.: A Study of an Encephalitic Strain of Hog Cholera Virus. Am. J. Vet. Res., 13, (July, 1952): 277-289.*]

Attempted Warfarin Suicide

Suicide was attempted by taking, in six days, a total of 567 mg. of warfarin, a rat poison whose action is almost identical with that of dicumarol except that its capacity to produce hypoprothrombinemia is about 40 times that of dicumarol.

The patient noted no ill effects until about the time he took the last of the poison. Generalized abdominal pain and back pains in the region of the kidneys then occurred, with nosebleeds and a petechial rash. His prothrombin time was four minutes and six seconds compared with a control time of fifteen seconds. Bloody urine was passed and one bowel movement was followed by a passage of gross blood. Treatment consisted of transfusions of whole blood and intravenous administration of vitamin K. By the fifth day, the urine was clear and two days later the prothrombin time was normal.—[*Roy W. Holmes and Julian Love: Suicide Attempt with Warfarin, a Bishydroxycoumarin-like Rodenticide. J. Am. M. A., 148, (1952): 935-937.*]

Propagation of Lymphoid Tumors in the Chicken Eye

Cellular suspensions prepared from tumors of the avian lymphoid tumor strains RPL 12 and RPL 16, when injected into the anterior chamber of the chicken eye, resulted in tumors in the iris, ciliary body, and adnexa. These tumors were propagated through six (RPL 12) and four (RPL 16) passages in the chicken eye. Cell-free tumor extracts prepared from tumors used in the first and last passages of each tumor strain produced an abnormally gray iris which appeared three to six weeks after inoculation and disappeared in about eight weeks. This condition also appeared in eyes injected with preparations of normal lymphoid tissue and in eyes of two lots injected with cellular material. On the basis of the clinical results and histopathological alterations obtained, it was concluded that the abnormal graying of the iris was the result of nonspecific reaction to the foreign tissue injected and could not be considered as an early stage in

the development of ocular lymphomatosis.—[*B. R. Burmester: The Propagation of Lymphoid Tumors in the Anterior Chamber of the Chicken Eye. Am. J. Vet. Res., 13, (April 1952): 246-251.*]

FOREIGN ABSTRACTS

Sheep as Carriers of Malignant Catarrhal Fever

Observations on 30 cases of malignant catarrhal fever of cattle are reported. The circumstances indicate that sheep might have served as asymptomatic carriers. Three sheep that had been kept in contact with cattle that died of malignant catarrh were observed for one month. They showed no symptoms. They were killed and used to inoculate 3 heifers. One heifer received 300 cc. of sheep blood subcutaneously and 600 cc. orally. Three and one-half months later, she developed symptoms resembling malignant catarrh, except that she recovered after twenty-seven days. Two other heifers, inoculated with emulsions of brain and parenchymatous organs, showed no symptoms in ten months.—[*N. M. Noskov, A. V. Surnachev, and V. N. Kanevski, Chkalov Provincial Veterinary Polyclinic: A Study of the Role of Sheep in the Epizoötiology of Malignant Catarrhal Fever of Cattle. Veterinariya (Moscow), 29, (March, 1952): 34-37.*]—R.E.H.

Salmonella in Healthy Animals

Fifty-six hogs, 106 cattle, and 102 calves were examined by culturing liver, bile, and intestinal content, using tetrathionate enrichment medium. The mesenteric lymph nodes of the cattle were also cultured. *Salmonella choleraesuis*, var. *kunzendorf*, was isolated from the liver of one hog and from the bile of another. All other animals were negative.—[*K. Lilleengen and R. Mickow: Undersokningar over forekomst av Salmonella hos friska slaktdjur (Meddelande L.). (Investigations on the Occurrence of Salmonella in Healthy Slaughter Animals. Nord. Vet.-med., 4, (Feb., 1952): 127-132.*]—A.G.K.

Eradication of Bovine Tuberculosis

The American method of slaughtering all tuberculous cows is not applicable in Europe.

The success of the improved Danish method in highly infected areas depends on the economic situation of the owner and on the buildings. The method may be successful if complete isolation of all reacting and suspicious animals is possible for a number of years. Artificial preventive active immunization of the young animals with living vaccines is a valuable aid. It is not yet proved whether dead material produces an increase of resistance of the same degree as the immunity conferred by living microbes.—[*E. Graub: Fundamentals of the Eradication of Tuberculosis in Cattle. Schweiz. Arch. f. Tierheilk., 94, (1952): 32.*]—F. KRAL.

Sulphthalyl for Coccidiosis

The authors describe testing sulphthalyl®* (phthalylsulfathiazole) in the treatment of coccidiosis in calves, heifers, lambs, and rabbits. The following dosage rate was suggested: for calves 6 to 12 months of age, 5 Gm. per day; for lambs 6 months of age, 2 Gm. per day; and rabbits, 0.2 Gm. per kilogram of body weight for six to seven days. These doses may be increased for calves and lambs without any manifestation of toxic symptoms. They have indicated that the drug may initiate its effect by attacking the coccidia by preventing or hampering the division of the nucleus, as well as the formation of the characteristic 2,- 4,- and 8-cell stages of the oöcysts. —[*E. W. Stenzel, S. Hoflund, and M. Koffman: Sulphthalyl a Good Preparation Against Coccidiosis. Skand. Vet., 9, (1947): 136-153.*]—CARL E. E. BUNN.

*Sulphthalyl is the A. B. Pharmacia, Stockholm, trademark for this compound.

BOOKS AND REPORTS

Etiology, Diagnosis, and Control of Infectious Mastitis

This small monograph, written by two leading authorities in veterinary bacteriology, gives a concise account of the etiology, diagnosis, and control of infectious bovine mastitis. It will be of interest to practicing veterinarians concerned with the problem of bovine mastitis and to undergraduate students of veterinary medicine.

This second edition has been completely revised. It contains 85 pages, divided into seven sections. The sections on the bacteriology, the diagnosis, and the control of mastitis are brief but complete. The treatment of mastitis with the antibiotics, chemicals, and combinations of drugs is up to date and outlines indications and dosages.

The real value of this handbook lies in its concise manner of presentation. Veterinarians will find it an excellent guide for use in handling this most difficult disease.—[*Handbook for the Etiology, Diagnosis, and Control of Infectious Bovine Mastitis: By Ival Arthur Merchant and R. Allen Packer. 2nd ed. 85 pages. Mimeoprint. Burgess Publishing Company, 426 S. Sixth St., Minneapolis, Minn. 1952. Price $2.00.*]—H. S. BRYAN.

Vibriosis in Cattle

Sixty-four publications relating to *Vibrio fetus*, a cause of abortion and delayed conception in cattle, are reviewed. Original work reported deals with many phases of the problem among which are included: (1) cultural requirements of *Vibrio fetus;* (2) the blood serum-agglutination test and its use in the detection of vibriosis; (3) the vaginal mucous-agglutination test and its use in the diagnosis of vibriosis; (4) long term observations on the course and effect of vibriosis in five herds; (5) evi-

dence that delayed conception is as, or more, important than abortion when analyzing the economic effect of the disease upon a herd; (6) establishment of infected semen and contact as two possible methods of transmission (contact transmission is proposed as possible from vulva to vulva); (7) vaccinal studies in which killed vaccines proved unsuccessful but live vaccines offered some hope for success; (8) reports that intrauterine infusions with streptomycin, terramycin, or aureomycin are of considerable value in overcoming "apparent sterility" associated with vibriosis.—[*Vibriosis in Cattle: By W. N. Plastridge, L. F. Williams, H. L. Easterbrooks, E. C. Walker, and R. N. Beccia. 54 pages. Storrs Agricultural Experiment Station, University of Connecticut, Conn. Sta. Bull. 281, 1951.*]—H. L. EASTERBROOKS.

Guide to the Dissection of the Cow

The 1949 edition of "Guide to the Dissection of the Cow" by Habel was reviewed in the May, 1950, issue of the JOURNAL of the American Veterinary Medical Association.

The 1951 edition of this guide includes illustrations and some clarifications of text material. The illustrations have made the book more valuable to anyone wishing to gain a quick review of an area.

Those are the major changes and improvements over the 1949 edition.—[*Guide to the Dissection of the Cow: By Robert E. Habel. 2nd ed. Paper. 127 pages. 15 illustrations. Cornell Cooperative Society, Ithaca, N. Y. 1951. No price given.*]—L. E. St. CLAIR.

Medical Aspects of Civil Defense

The Council on National Emergency Medical Service of the American Medical Association has compiled in booklet form a series of articles which appeared in the *Journal of the American Medical Association* on the various medical aspects of civil defense. These articles were sponsored by the Council but do not necessarily reflect the opinions of it or other official agencies.

Although most of the articles pertain almost entirely to purely medical civil defense, there are sections that are of more direct concern to veterinarians. Articles on the organization of medical and health services in civil defense, the medical aspects of biological warfare, atomic burns, and the radiological aspects of civil defense will be of interest to veterinarians directly connected with civil defense. Many veterinarians who are not connected with civil defense activities should be and, therefore, this booklet will be a valuable source of reference material.

Copies are available from the Council on National Emergency Medical Service, American Medical Association, 535 N. Dearborn, Chicago 10, Ill. Price: Single copies 25 cents; 100 or more, 20 cents.

REVIEWS OF VETERINARY MEDICAL FILMS

Fighting Foot-and-Mouth Disease in Mexico.—Sound, color, 16 mm., running time about twenty minutes. Produced by the Information Division of the Joint Mexico and United States Commission for the Eradication of Foot-and-Mouth Disease; available from the AVMA Film Library, 600 S. Michigan Ave., Chicago 5, Ill., and the U.S.D.A. Motion Pictures Service, Washington, D. C. The handling charge if requested from the AVMA is $1.00.

The story of the battle against foot-and-mouth disease in Mexico, which has apparently been waged to a successful conclusion, is depicted by this film. The picture shows the obstacles presented by the terrain, jungles, and the backwardness of many of the people in the remote areas of Mexico. The extreme importance of the domesticated animals to the very existence of the Mexican farmer is stressed, as are difficulties encountered due to the absence of modern methods of communications, such as the rarity of newspapers and radios.

Veterinarians will be especially interested in portions of the film showing symptoms, lesions, and the spread of the disease; also, the parts of the film devoted to explaining the difficulties associated with the procurement, production, and administration of the vaccine. Altogether, 60 million doses of vaccine were produced and the 17 million animals in the infected areas were vaccinated four times during the campaign.

Laymen and veterinarians will find the outline of the organization of the Joint Commission, the battle forces, and procedures of the campaign interesting and informative. At one time, 8,000 full-time workers were engaged in the fight.

From a purely educational viewpoint to livestock producers, the film should explain more thoroughly how the slaughter and quarantine phases of the campaign were continued after vaccination was added to the program. Veterinarians showing the film to lay groups should stress this fact and not leave the impression, which viewers may get, that vaccination alone made the battle successful.

Veterinarians will be pleased with the references made to the integral part members of the profession played in the campaign. The conclusion of the film pays tribute to the giant animal disease "experiment" that proved successful. As such, the eradication of foot-and-mouth disease in Mexico is a remarkable accomplishment and a tribute to the Bureau of Animal Industry, to the leaders and workers of the Commission, and especially to the veterinarians who worked so valiantly.

With foot-and-mouth disease in Canada and the opening of the Mexican border to animals and beef, this film should be of great interest for showing to veterinarians and lay groups.

THE NEWS

The Fifteenth International Veterinary Congress in Stockholm

U. S. Committee Announces Tour Plans— Speakers From U.S.A. Nominated

Since the formation of the United States Committee was announced in the May JOURNAL (pp. 322-323), there have been several noteworthy developments relative to participation of veterinarians from this country in the program of the Stockholm Congress, Aug. 9 to 15, 1953. Tour plans have also been developed and will undoubtedly be of interest to a number of veterinarians and their wives, several already having indicated their intention to go.

TOUR PLANS APPROVED

At its meeting in Atlantic City on June 24, the Committee approved a tour plan offered by Travel Service Bureau, Inc., of Brookline, Mass., one of the four agencies which had been invited to submit proposals. The tour is set up to follow the 1953 AVMA convention which will be held in Toronto, July 20-23. It provides four itineraries: a basic tour, a Switzerland extension, an Italian extension, and a short tour.

Tour No. 1 (Basic Tour).—This provides departure from Montreal on July 24 via Canadian Pacific steamship, travel through England, Scotland, and Norway prior to the Congress; travel to Denmark, Holland, Belgium, France, and back to London before departure by steamship for home on September 1, with arrival in Montreal on September 8. (Those returning by air arrive in New York, Sept. 2.)

Tour No. 2 (Switzerland Extension).—This is essentially the same as No. 1 except that, following the Congress, the travel to the Continent includes Germany and Switzerland before return to London for departure home on September 8 and arrival in Montreal on September 15. (Those returning by air arrive in New York on Sept. 9.)

Tour No. 3 (Italian Extension).—This is essentially the same as pre-Congress Tours No. 1 and No. 2, except that travel on the Continent includes Italy, a stop in Switzerland, and then the usual Paris and London stops before departure by steamship on September 15, with arrival in Montreal on September 22. (Those returning by air arrive in New York, Sept. 16.)

Tour No. 4 (Short Tour).—This is essentially the same as first part of foregoing tours. Post-Congress travel includes brief stops in Denmark, Paris, and England prior to departure for home by steamship on August 25 and arrival in Montreal on September 1. (Those returning by air arrive in New York, Aug. 26.)

Approximate Costs of Tours

Tour No. 1—from $1,305 to $1,553.
Tour No. 2—from $1,406 to $1,654.
Tour No. 3—from $1,591 to $1,839.
Tour No. 4—from $1,213 to $1,461.

The variations in cost depend on whether travel is round trip by steamer, going by steamship and return by air, or round trip by air, either tourist or standard.

TOUR LEAFLET TO BE MAILED

In order that the full potential of tour participation may be realized, an information leaflet will be mailed in due time to all members in the United States and Canada. Persons who are interested can then obtain complete information and make reservations directly to Mr. Nelson M. Jost, Travel Service Bureau, Inc., 318 Harvard St., Brookline 46, Mass.

The tour will be personally conducted by Mr. Jost; his agency has already reserved space on steamships and made other necessary advanced arrangements for travel, hotel accommodations, etc.

PROGRAM SPEAKERS FROM UNITED STATES NOMINATED

In recent months, the U. S. Committee has received a number of suggestions for topics and speakers for the Stockholm Congress. The list is not yet final but, in all, more than twenty reporters have been nominated to present papers on various subjects for presentation at plenary sessions or section meetings of the Congress. The titles of these section programs were published in the May JOURNAL (pp. 322-323).

The final selection of speakers and subjects is made by the Permanent Committee of the

I.V.C., in collaboration with the Organizing Committee for the Stockholm Congress. It is hoped that about 15 or more participants will be chosen from the U.S.A. When the selections are known, they will be published in the JOURNAL.

OFFICIAL INVITATION EXTENDED BY SWEDISH GOVERNMENT

Several weeks ago, the State Department received an official invitation for United States participation in the Fifteenth International Veterinary Congress transmitted by the Swedish Embassy in Washington. It is expected that the government will approve an official delegation and the U.S. Committee is asking that it include representatives from outside the government as well as those whose official positions make their attendance at the Congress desirable.

The U. S. Committee as announced in the May JOURNAL is headed by Dr. W. A. Hagan, chairman, New York State Veterinary College, Ithaca, N.Y.; Dr. J. G. Hardenbergh, 600 S. Michigan Ave., Chicago 5, is secretary. The executive subcommittee comprises Drs. Hagan, Hardenbergh, and Brig. Gen. J. A. McCallam.

The Organizing Committee has as officers Dr. Axel Alegren, chairman, and Dr. Axel Isaksson, secretary, State Veterinary Medical Institute, Stockholm 50, Sweden.

Prof. L. deBlieck, Bilthoven, Netherlands, is secretary of the Permanent Committee of the I.V.C.

Competition Announced for 1953-1954 Fulbright Awards

The Committee on International Exchange of Persons of the Conference Board of Associated Research Councils announced on June 12, 1952, the competition for Fulbright Awards for university lecturing and postdoctoral-level research in Europe and the Near East, which will be granted to successful applicants for 1953-1954. Included in this competition are awards for Austria, Belgium and Luxembourg, Denmark, Egypt, France, Greece, Iraq, Italy, Netherlands, Norway, Turkey, United Kingdom and colonial dependencies.

Also included are awards for Japan, Pakistan, and the Union of South Africa. A Fulbright agreement has recently been signed with the Union of South Africa and a small program will be initiated for 1953-1954.

The committee is preparing a detailed program booklet concerning the awards. Application forms and additional information is obtainable from: Conference Board of Associated Research Councils, Committee on International Exchange of Persons, 2101 Constitution Avenue, Washington 25, D.C. Applications must be postmarked no later than Oct. 15, 1952, the closing date.

This competition is specifically for university lecturing and postdoctoral-level research. Graduate students desiring to enroll for courses abroad or to pursue a directed program of studies at the *predoctoral* level should apply to their local Fulbright adviser or directly to the Institute of International Education, New York, N.Y.

When Moving, Notify the AVMA

Dr. M. R. Clarkson Is Promoted

A new high for the veterinary profession was reached when Dr. M. R. Clarkson became deputy administrator of the Agricultural Research Administration, U. S. Department of Agriculture, on July 9, 1952. He will assist in directing the activities of the A.R.A. which supervises the office of experiment stations and six scientific bureaus, one of which is the Bureau of Animal Industry.

For the past fifteen months, Dr. Clarkson has been special assistant to the administrator of the A.R.A. on matters of defense. He will continue to be responsible for defense activities. He played a prominent part in directing

Dr. M. R. Clarkson

U.S.D.A. participation in the foot-and-mouth disease program in Mexico. Chief of the Division of Inspection and Quarantine in the BAI since 1947, he was previously assistant chief of the Meat Inspection Service. Receiving B.S. and D.V.M. degrees from Washington State College in 1930, Dr. Clarkson was admitted to the bar in the District of Columbia after being awarded an LL.B. degree by Georgetown University in 1942. He is married and has three daughters.

Dr. Spencer Retires as Manager of Livestock Conservation, Inc.

Dr. W. T. Spencer (KCV '07) of Lincoln, Neb., regional manager of Livestock Conservation, Inc., retired on June 30, 1952, after forty-five years of efficient veterinary service. Dr. Spencer first saw service with the Bureau of Animal Industry in 1919 when he was appointed state veterinarian for Nebraska. In 1921, he became livestock commissioner for the Omaha livestock market. Besides his notable work in tuberculosis eradication and in developing parasiticides, Dr. Spencer has been active in encouraging 4-H projects.

WOMEN'S AUXILIARY

The Atlantic City Convention—A Woman's Viewpoint.—The world-famous Boardwalk, the rolling chairs, wide stretches of sandy beach, beach chairs and cabanas, shops and excellent sea food, the continuous roll of the ocean waves—that's Atlantic City. To members of the Women's Auxiliary to the AVMA, Atlantic City was more than a place to relax. It was a place to greet old friends and make new ones. It was the thirty-fifth annual meeting of the Women's Auxiliary.

Local committee members had worked long and thoughtfully to make this a truly enjoyable and worth-while occasion for all who attended. We are all grateful to them for their most successful planning. The hospitality lounge proved to be a popular place to meet, chat, and enjoy a cup of tea or coffee.

Auxiliary members in large numbers attended the Opening Session on Monday and the Closing Session on Thursday. We were honored to have our Auxiliary president extend greetings to the entire convention during the formal Opening Session, and we were likewise pleased to have our officers installed during the Closing Session. This is the first year that joint installation ceremonies for Auxiliary and Association officers have been held.

The tea and reception on Monday, June 23, set the tempo for activities for women. Tea was served in the Terrace Room of the Ritz-Carlton Hotel overlooking the ocean. On Tuesday, the luncheon and the lecture by Mrs. Henry Kistner on flower arrangement were

Mrs. C. E. Bild, retiring president, installs the new officers of the Women's Auxiliary to the AVMA at the Atlantic City meeting.

They are (left to right)—Mrs. C. E. Bild, Miami, Fla., retiring president; Mrs. H. S. MacDonald, Toronto, Canada, president; Mrs. R. A. Runnells, East Lansing, Mich., president-elect; Mrs. L. R. Richardson, Ravenna, Ohio, first vice-president; Mrs. E. N. Moore, Wooster, Ohio, second vice-president; Mrs. A. E. Coombs, Skowhegan, Maine, third vice-president; Mrs. C. M. Rodgers, Blandinsville, Ill., secretary; Mrs. C. C. Rife, Atlanta, Ga., treasurer; Mrs. Lewis H. Moe, Stillwater, Okla., chairman, House of Representatives; and Mrs. Leon Cloud, Fort Worth, Texas, recorder, House of Representatives.

both enjoyable. The brunch and style show on Wednesday received favorable comment. The president's dance and special stage entertainment provided a full evening of fun and relaxation after full days of Auxiliary meetings. Swimming and bicycling on the Boardwalk were among the activities for the teenagers and on down to the youngest children in attendance.

Mrs. C. E. Bild (left), of Miami, retiring president, installing Mrs. H. S. MacDonald, of Toronto, as president of the Women's Auxiliary at the Atlantic City Meeting.

Aside from these delightful entertainment features, we had our serious side too. The budget committee and the executive board met in long sessions before the convention opened. At the house of representatives, there were some changes made in the constitution. Committee reports were also given. We are working very closely with our student auxiliary groups. A $25 award to a senior student in each approved veterinary college was again approved. This past year, 12 loans were made to senior students amounting to $4,800. We are assisting the AVMA in collecting money for the Research Fund. A new project which we will all hear more about later is the "AVMA Auxiliary News." At the close of the convention our membership was 2,553.

And so another convention is history. Let's all plan to meet in Toronto in 1953.

s/(MRS. R. A.) LAURA RUNNELLS, *President-Elect.*

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California Auxiliary.—The Women's Auxiliary to the California State Veterinary Medical Association held its annual meeting at the Arrowhead Springs Hotel, San Bernardino, June 15-18, 1952, with a registration of 88. The program included a cocktail party, aquacade followed by buffet dinner, card party with door prizes, guided tours through underground steam caves, association luncheon, fashion show, banquet, and breakfast served at the pool.

The new officers of the Auxiliary are Mrs. T. J. Hage, Davis, president; Mrs. Charles D. Stafford, Novato, vice-president; Mrs. Thomas B. Eville, Fresno, secretary-treasurer; Mrs. Jay Wallis, Hemet, member-at-large; Mrs. Herbert I. Ott, Norwalk, junior past-president.

s/(MRS. CHARLES D.) MARIE STAFFORD, *Retiring Secretary.*

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South Carolina Auxiliary.—The summer meeting of the Women's Auxiliary to the South Carolina Veterinary Medical Association, at Clemson, opened with a luncheon in the Gold Room of the Clemson House. A most welcome guest was Mrs. C. E. Bild of Miami, Fla., past-president of the Women's Auxiliary to the AVMA, who spoke about the work of the auxiliary and the meeting in Atlantic City.

Following the luncheon, the business meeting was held with *27* members and four visitors present. The following officers were elected: Mrs. L. D. Rodgers, Greenwood, president; Mrs. R. L. Willis, Charleston, vice-president; Mrs. Otto Strock, Orangeburg, secretary; and Mrs. Bill Rawlinson, Manning, treasurer.

s/(MRS. OTTO) KATHRYN STROCK, *Secretary.*

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Vermont Auxiliary.—The summer meeting of the Women's Auxiliary to the Vermont Veterinary Medical Association was held June 17, 1952, in the new home economics building on the campus of the University of Vermont in Burlington. There were *26* members and guests present.

The business meeting was conducted by President Mrs. James Wheeler. Mrs. C. E. DeCamp, secretary of the New York state auxiliary, extended greetings from that group, and a letter from Mrs. C. E. Bild, president of the national auxiliary, was read. Mrs. Norman Cox, chairman of the award committee, announced that this year's outstanding graduate veterinary student from Vermont was Dr. Albert Greenwood, of Bellows Falls, who received his D.V.M. degree from the New York State College of Veterinary Medicine. He was the recipient of an instrument of his choice (maximum of $10). Members voted to contribute $25 to the AVMA Research Fund.

Mrs. Richard Fournier, of South Burlington, was appointed alternate delegate to the house of representatives in place of Mrs. Alan Wright.

After the business session, members and guests met for a luncheon in the Green Room of the Hotel Vermont. In the evening, veteri-

No invitation is necessary to become a member of the Women's Auxiliary to the AVMA. We welcome all interested women. The dues are only $1.00 per year. Just write to: Mrs. C. M. Rodgers, Secretary, Blandinsville, Ill.

narians and their wives enjoyed an evening sail on Lake Champlain aboard the historic side-wheeler "Ticonderoga" where a buffet supper was served.

s/(MRS. W. D.) BARBARA G. BOLTON, *Secretary.*

STUDENT CHAPTER ACTIVITIES

California Chapter.—A resumé of the activities for the spring semester, 1952, of the University of California Student Chapter of the AVMA follows.

The following speakers appeared on the scientific programs: **Captain Elvin McClerkin** of the U. S. Air Force; **Dr. Donald H. Wong,** Dixon; **W. E. Brandner,** Petaluma; **Mr. Ryerson,** dean of the College of Agriculture of the University of California; **Dr. Joe Brown,** Lodi; and **Dean G. H. Hart.**

Officers who served the Chapter during this semester were: Roy J. Cobble, president; Bill Kortum, president-elect; John Shirley, vice-president; John F. Chapman, secretary; and Kenneth Erwin, treasurer. Officers elected at the June 5 meeting to serve during the fall semester are: Bill Kortum, president; Ben Lundberg, president-elect; Jim Steere, vice-president; Larry Proctor, secretary; and Jack Tucker, treasurer. The average attendance at these meetings was 98.

A committee, headed by Larry Proctor, prepared a float for the annual Picnic Day parade, which won first place in the first division and also won the sweepstakes award.

Social activities of the Chapter during the spring semester included the spring dance and the annual steak fry.

s/JOHN F. CHAPMAN, *Secretary.*

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Georgia Chapter.—A resumé of the University of Georgia Student Chapter of the AVMA for the last half of the 1951-1952 school year follows:

Dr. C. C. Von Gremp, Atlanta, was guest speaker at the February 11 meeting. On March 10, **Col. Dan Stevenson,** V.C., with the Third Army Corps, Atlanta, told of the work of the Army Veterinary Corps. **Dr. H. Lund,** head of the Department of Entomology of the University, spoke at the April 14 meeting. On April 28, **Dr. R. A. Mays,** state veterinarian of South Carolina, addressed the group. State Commissioner of Agriculture **Tom Linder,** on May 12, told of the role of the veterinarian in Georgia today.

The following officers were elected at the business meeting on May 26: Verlin Krabill, president-elect; Ned Ellett, vice-president; Herschel Harley, treasurer; Donald Walbert, corresponding secretary; Edwin Brown, secretary; and Drs. A. M. Mills and D. E. Cooperrider, faculty advisors.

s/CARL D. MCELVEEN, *Retiring Secretary.*

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Iowa Chapter.—At a special meeting of the Iowa State College Student Chapter of the AVMA, on May 21, 1952, during which Russell Anthony, retiring president, turned over the president's gavel to Robert McCully, new president, the following members of the executive council were elected for the next school term: Lee Sutherland, president-elect; Durwood Pedigo, vice-president; Raymond Pahle, treasurer; William Thomas, secretary; Robert Miesbauer, critic and publicity chairman; and Dr. Oliver Whitcomb, faculty advisor. The following class representatives were introduced: Robert Boyce (senior), Leo Schmall (junior), and William Owen (sophomore). The program committee consists of Lee Sutherland, Horace Petersen, and Jack Cohn.

s/R. G. MIESBAUER, *Publicity Chairman.*

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Washington Chapter.—A new chapter of the national veterinary medical honor society Phi Zeta was installed at Washington State College early in April, 1952, by Dr. Earl Hewitt, of Ames, Iowa. Dr. W. E. Ribelin will serve as secretary of the new organization, which will be known as the Iota Chapter. Staff charter members, in addition to Dr. Ribelin, are Drs. Jon McCurdy, H. F. Beardmore, Gabel Conner, and Gordon Keown. Student members are Robert W. Leader, Vernon J. Miller, Howard F. Lancaster, Robert L. Carlson, Fred W. Keller, Warren J. Wegert, Orville L. Frost, Richard J. Smith, John H. Schmidt, George Migaki, Henry C. Harris, and Raymond E. Rediske, all seniors; and Charles M. Reed, Lynn A. George, Clarence G. Ulrich, and Robert Crossley, of the junior class.

s/RICHARD D. REID, *Publicity Chairman.*

Recent Graduates Must Register for Doctor's Draft

Public Law 779 of the 81st Congress (doctors' draft) requires that those receiving a doctor of veterinary medicine degree must register with a Selective Service (draft) Board as special registrants within five days of graduation. Excluded are those who hold Reserve commissions in any branch of the Armed Services.

Recent graduates who have not done so should register at once with their nearest Selective Service Board. If already registered under the basic Selective Service act (the regular draft), their Selective Service registration card should be presented at the time of the special registration so that the number of the regular registration will be properly recorded.

Missouri Chapter.—On May 12, members of the University of Missouri Student Chapter of the AVMA heard **Mr. E. M. Wood,** director

Exhibit of the Missouri Student Chapter of the AVMA which won first place among the educational exhibits in the 1952 Farmers' Fair.

of the Livestock and Wool Marketing Board of the Missouri Farm Bureau Federation, give an inspiring talk on "Factors Affecting the Livestock and Meat Industry."

The new officers for the fall semester of the 1952-1953 school year elected at this meeting are: H. H. Robertson, president-elect; Ralph C. Manfull, vice-president; John P. Hickcox, secretary; and Charles W. Monsees, treasurer.

An exhibit on foot-and-mouth disease, brucellosis, and rabies, prepared by the student chapter, won first place in the educational exhibits of the 1952 Farmers' Fair, an annual activity of the students of the University of Missouri College of Agriculture. This is the first time the student chapter has won the top award. Members who prepared the exhibit are Chester R. Plegge, illustrator; George W. Fischer; and John P. Hickcox.

s/JOSEPH O. MINNICK, *Secretary.*

APPLICATIONS

Applicants — Members of Constituent Associations

In accordance with paragraph (b) of Section 2, Article X, of the Administrative By-Laws, as revised at the annual meeting of the House of Representatives, Aug. 18, 1951, in Milwaukee, Wis., the names of applicants residing within the jurisdictional limits of the constituent associations shall be published once in the JOURNAL.

The following applicants have been certified as members of the constituent association that has jurisdiction over the area in which the applicant resides. This certification was made by the secretary of the constituent association in accordance with Section 2, Article X, of the Administrative By-Laws.

First Listing

BURK, JAMES ARTHUR
105 S. Earl St., Shippensburg, Pa.
D.V.M., Ohio State University, 1913.

CLAIRMONT, MOZART
32 St. Georges St., St. Jean, Que.
D.V.M., Quebec Veterinary College, 1937.

FLICKINGER, ROBERT G.
1601 13th St., N., Fargo, N. Dak.
D.V.M., Iowa State College, 1949.

HOOPER, CHERRY A.
Department of Therapeutics & Small Animal Diseases, New York State Veterinary College, Cornell University, Ithaca, N. Y.
D.V.M., Ontario Veterinary College, 1950.

JIRIKOWIC, J. C.
Bottineau, N. Dak.
D.V.S., U. S. College of Veterinary Surgeons, 1909.

MCCLELLAN, JOHN B.
142 W. Patrick St., Frederick, Md.
D.V.M., U. S. College of Veterinary Surgeons, 1917.

MIKEL, CHESTER J.
511 New Federal Bldg., Atlanta 3, Ga.
D.V.M., Colorado A. & M. College, 1934.

MILLS, HORACE A.
54-A Mill St., Newton, N. J.
D.V.M., Kansas State College, 1927.

MOWRER, ROBERT F.
Box 322, Ontario, Ore.
D.V.M., Washington State College, 1938.

MURRAY, JOHN D.
143 E. High St., Painted Post, N. Y.
D.V.M., Cornell University, 1939.

PELOT, HARRY H.
1609 Circle Rd., Waco, Texas.
D.V.M., Texas A. & M. College, 1943.

RUBIO, PACIFICO C.
c/o Dr. M. R. Sebright, 3129 Spring Grove Ave., Cincinnati 25, Ohio.
D.V.M., University of the Philippines, 1951.

SCHALL, J. HUBLEY
100 Radnor St., Harrisburg, Pa.
V.M.D., University of Pennsylvania, 1928.

TAYLOR, HOWARD C.
457 N. Oakhurst Dr., Beverly Hills, Calif.
D.V.M., Colorado A. & M. College, 1942.

THOMSON, HOWARD B.
1417 Cherry St., Olympia, Wash.
D.V.M., Iowa State College, 1919.

WEIBES, PAUL A., SR.
Clarksville, Iowa.
D.V.M., Chicago Veterinary College, 1917.

WHEAT, JOHN C.
868 Summer Ave., Syracuse 10, N. Y.
D.V.M., Cornell University, 1913.

WOLFE, LARRY J.
954 Perry Hiway, Perrysville, Pa.
V.M.D., University of Pennsylvania, 1941.

WYNN, WILLIAM W.
R.D. 2, Bridgeton, N. J.
D.V.M., Cornell University, 1929.

Applicants — Not Members of Constituent Associations

In accordance with paragraph (b) of Section 2, Article X, of the Administrative By-Laws, as revised at the annual meeting of the House of Representatives, Aug. 18, 1951, in Milwaukee, Wis., notice of all applications from applicants residing outside of the jurisdictional limits of the constituent associations, and members of the Armed Forces, shall be published in the JOURNAL for two successive months. The first notice shall give the applicant's full name, school, and year of graduation, post office address, and the names of his endorsers.

First Listing

ELLIS, HARVIE R.
412 Dickman Rd., Fort Sam Houston, Texas.
D.V.M., Texas A. & M. College, 1928.
Vouchers: J. G. Horning and W. A. Hale.

LINDLEY, RIES R.
Vallarta No. 1, Apartado Postal No. 751, Mexico, D. F.
D.V.M., Texas A. & M. College, 1944.
Vouchers: Donald L. Williams and C. D. Van Houweling.

PATE, WALTER E.
4540 Flora Ave., St. Louis 10, Mo.
D.V.M., Texas A. & M. College, 1946.
Vouchers: M. L. Tuttle and C. C. Walch.

Second Listing

ADAMS, CARROLL E., Camp San Luis Obispo, San Luis Obispo, Calif.

FARMER, GARLAND R., 2749 S. Glencoe, Denver, Colo.

WEDMAN, ELWOOD E., Office of the Station Veterinarian, Fort Dix, N. J.

1952 Graduate Applicants

The following are graduates who have recently received their veterinary degree and who have applied for AVMA membership under the provision granted in the Administrative By-Laws to members in good standing of student chapters. Applications from this year's senior classes not received in time for listing this month will appear in later issues. An asterisk (*) after the name of a school indicates that all of this year's graduates have made application for membership.

First Listing

University of California

INGRAHAM, RODNEY H., D.V.M.
Rt. 2, Box 422A, Merced, Calif.
Vouchers: J. F. Meyer and D. E. Barr.

Colorado A. & M. College

BEECHER, EDWARD F., JR., D.V.M.
1409 Grady Ave., Charlottesville, Va.
Vouchers: J. Farquharson and F. J. Milne.

KINGHORN, FERRIN "B", D.V.M.
605 E. Prospect St., Fort Collins, Colo.
Vouchers: O. R. Adams and W. A. Aanes.

SOBULE, MARVIN L., D.V.M.
5600 Auburn Rd., Apt. B, Jacksonville, Fla.
Vouchers: L. C. Moss and L. K. Wayt.

STEVENSON, AUGUST H., D.V.M.
1040 S.W. 3rd Ave., Apt. 2, Ontario, Ore.
Vouchers: L. M. Koger and L. A. Griner.

University of Illinois

BAKER, JOHN ROBERT, D.V.M.
405 N. Main St., Mt. Carroll, Ill.
Vouchers: T. H. Brasmer and L. W. Derrer.

CAMPBELL, KENNETH D., D.V.M.
105 W. Vine St., Champaign, Ill.
Vouchers: R. E. Witter and R. Hatch.

MURPHY, EDWARD C., D.V.M.
701½ Pulaski, Lincoln, Ill.
Vouchers: R. E. Witter and T. H. Brasmer.

SPECHT, WILLIAM K., D.V.M.
515 Oakland Ave., Morrison, Ill.
Vouchers: J. H. Moret and A. M. Olson.

Iowa State College

BABCOCK, JOHN A., D.V.M.
Goodhue, Minn.
Vouchers: E. A. Benbrook and E. A. Hewitt.

BEVINS, NOEL F., D.V.M.
4841 Hull St., Skokie, Ill.
Vouchers: I. A. Merchant and F. K. Ramsey.

BURCH, LOUIS L., D.V.M.
Logan, Iowa.
Vouchers: M. A. Emmerson and F. K. Ramsey.

BURGER, AUGUST F., JR., D.V.M.
Alta, Iowa.
Vouchers: C. H. Covault and D. L. Baker.

CAVANAUGH, LEONARD, D.V.M.
Anthon, Iowa.
Vouchers: F. K. Ramsey and M. A. Emmerson.

CHAPIN, NEAL E., D.V.M.
Lena, Ill.
Vouchers: H. D. Bergman and B. W. Kingrey.

CLARK, MARVIN ELSTON, D.V.M.
1024 E. Broadway, Monmouth, Ill.
Vouchers: F. K. Ramsey and R. A. Packer.

CRANE, MELVIN R., D.V.M.
General Delivery, Elk Horn, Iowa.
Vouchers: F. K. Ramsey and P. C. Bennett.

FRITZ, DONALD L., D.V.M.
115 N. Washington, Platteville, Wis.
Vouchers: I. A. Merchant and C. H. Covault.

GULDNER, JOHN S., D.V.M.
1106 Sycamore St., Waterloo, Iowa.
Vouchers: D. L. Baker and R. A. Packer.

HESSE, NORMAN H., D.V.M.
LuVerne, Iowa.
Vouchers: E. C. Jensen and M. A. Emmerson.

JERMIER, JAMES A., D.V.M.
110 E. 20th St., Cedar Falls, Iowa.
Vouchers: R. Getty and R. P. Worthman.

KNOSBY, AUSTIN T., D.V.M.
Elma, Iowa.
Vouchers: F. K. Ramsey and I. A. Merchant.

KUNKLE, HARRY W., D.V.M.
Stratford, Iowa.
Vouchers: E. C. Jensen and M. A. Emmerson.

MCANDREW, PAUL J., D.V.M.
Charlotte, Iowa.
Vouchers: C. D. Van Houweling and W. A. Aitken.

MAU, JACK A., D.V.M.
26 Second St., N. W., Le Mars, Iowa.
Vouchers: I. A. Merchant and H. D. Bergman.
MISKIMINS, RADEAN S., D.V.M.
Box 6, Kimball, S. Dak.
Vouchers: F. K. Ramsey and O. W. Whetcomb.
O'BRIEN, WILLIAM J., D.V.M.
Box 256, Ryan, Iowa.
Vouchers: I. A. Merchant and C. H. Covault.
OLSON, WILLIAM H., D.V.M.
Norwood, Minn.
Vouchers: C. J. Daugherty and T. F. Bartley.
STAMY, RICHARD O., D.V.M.
Norway, Iowa.
Vouchers: F. K. Ramsey and I. A. Merchant.
THORPE, DARYL K., D.V.M.
202 Dakota Ave., S., Huron, S. Dak.
Vouchers: F. K. Ramsey and L. C. Payne.
VEACH, ROBERT L., D.V.M.
310 2nd St., Webster City, Iowa.
Vouchers: C. H. Covault and P. C. Bennett.
VOETBERG, ROBERT R., D.V.M.
202 1st Ave., S., Mount Vernon, Iowa.
Vouchers: I. A. Merchant and F. K. Ramsey.
WRIGHT, BURMAN L., D.V.M.
Shelby, Iowa.
Vouchers: F. K. Ramsey and P. C. Bennett.

Michigan State College

ANDERSON, PALMER BYRON, D.V.M.
33 S. 4th St., Platteville, Wis.
Vouchers: G. R. Moore and R. G. Schirmer.
BLAKE, JOSEPH JEROME, D.V.M.
1902 N. Elm Rd., R.F.D. 2, Jackson, Mich.
Vouchers: E. K. Sales and W. O. Brinker.
GREUBEL, ALVIN G., D.V.M.
907 E. 3rd St., Fowler, Ind.
Vouchers: F. H. Brown and D. Van Meter, Jr.
HAELTERMAN, EDWARD O., D.V.M.
9 W. State St., West Lafayette, Ind.
Vouchers: J. J. Stockton and E. K. Sales.
HUSSEY, EUGENE R., D.V.M.
Kezar Falls, Maine.
Vouchers: E. A. White and E. K. Sales.

Oklahoma A. & M. College*

BURNETT, WILLIAM C., D.V.M.
c/o State Veterinarian, State Capitol, Salem, Ore.
Vouchers: C. D. Labahn and J. B. Corcoran.

University of Pennsylvania

CAMERON, JOHN S., V.M.D.
Apt. 63, Red Bank Manor, Harding Rd., Red Bank, N. J.
Vouchers: R. C. Snyder and D. G. Lee.
CLACK, FRANK B., V.M.D.
319 N. Buhl Farm Dr., Sharon, Pa.
Vouchers: R. C. Snyder and J. E. Stefanick.
COOGAN, ARTHUR P., V.M.D.
201 Pennsylvania Ave., Claymont, Del.
Vouchers: R. C. Snyder and J. E. Martin.
DERBY, LYNN R., V.M.D.
197 Elmendorf St., Kingston, N. Y.
Vouchers: R. C. Snyder and G. Hoppenstedt.
HAWS, G. ALLEN, V.M.D.
29 N. 5th Ave., Clarion, Pa.
Vouchers: R. C. Snyder and J. H. Mark.
HAWS, NATALIE CASE, V.M.D.
29 N. 5th Ave., Clarion, Pa.
Vouchers: R. C. Snyder and J. H. Mark.
LONGORIA, VICTOR M., V.M.D.
4322 Walnut St., Philadelphia 4, Pa.
Vouchers: R. C. Snyder and J. H. Mark.
MOON, CALVIN, V.M.D.
2222 S. Broad St., Trenton 10, N. J.
Vouchers: R. C. Snyder and A. C. Wood.
NEWMAN, EDWARD PETER, JR., V.M.D.
809 Chambers Ave., Gloucester, N. J.
Vouchers: R. C. Snyder and J. T. O'Connor, Jr.
NEWMAN, JAMES M., V.M.D.
Rt. 1, Box 1-A, Opportunity Heights, Wytheville, Va.
Vouchers: R. C. Snyder and C. W. Raker.
PATT, JOHN F., V.M.D.
R.D. 2, Mohnton, Pa.
Vouchers: R. C. Snyder and C. W. Raker.
QUATROCHE, JOHN E., V.M.D.
384 Chestnut St., St. Marys, Pa.
Vouchers: R. C. Snyder and J. T. O'Connor, Jr.
RUDE, THEODORE A., JR., V.M.D.
Box 306, Skiatook, Okla.
Vouchers: R. C. Snyder and W. C. Carter.
SAUER, ROBERT M., V.M.D.
317 Princeton Rd., Barrington Manor, Barrington, N. J.
Vouchers: R. C. Snyder and R. D. Maloney.
SCHWARTZMAN, ROBERT M., V.M.D.
360 Dixwell Ave., New Haven, Conn.
Vouchers: R. C. Snyder and M. J. Deubler.
STOYAK, JOSEPH M., V.M.D.
528 North St., Throop 12, Pa.
Vouchers: R. C. Snyder and F. Kral.
WERNER, JOHN R., V.M.D.
Lauxmont Farms, Wrightsville, Pa.
Vouchers: R. C. Snyder and S. F. Scheidy.
WILKINS, JOHN L., V.M.D.
R.D. 4, Muncy, Pa.
Vouchers: R. C. Snyder and S. M. Ross.

Texas A. & M. College

SWOPE, BILLY J., D.V.M.
Box 409, 1414 N. Jefferson, Mt. Pleasant, Texas.
Vouchers: N. C. Ralston and J. W. McCoy.

Washington State College

BROWN, JOHN J., D.V.M.
3745 Harrison Ave., Butte, Mont.
Vouchers: K. C. Pearson and M. W. Schara.
CARLSON, ROBERT L., D.V.M.
General Delivery, Sequim, Wash.
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PALMER, RALPH R., D.V.M., Mitchell, S. Dak.
REINERTSON, ODELL L., D.V.M., Hendricks, Minn.
SCHMIDT, JO ANNE, D.V.M., 17601 Oak Park Ave., Tinley Park, Ill.
SCHUBERT, GLEN O., D.V.M., Grand Meadow, Minn.
SIGFRID, JOSEPH A., D.V.M., Parkers Prairie, Minn.
SMITH, BERTRAM L., D.V.M., c/o Mrs. John Hagen, Fertile, Minn.
SOOK, RONALD M., D.V.M., 309 W. Redwood St., Marshall, Minn.
TEMPLIN, HAROLD H., D.V.M., c/o Edward Lustmann, Glencoe, Minn.
TOWNE, CHARLES W., D.V.M., Box 483, St. Cloud, Minn.
USENIK, EDWARD A., D.V.M., 409 Douglas Ave., Eveleth, Minn.
WINDSCHILL, ROBERT, D.V.M., St. James, Minn.
WINSLOW, CHARLES W., D.V.M., La Moure, N. Dak.
WOLF, GRISELDA F., D.V.M., 1500 Albany St., St. Paul, Minn.
ZINTER, DELVIN E., D.V.M., Ellendale, N. Dak.

New York State Veterinary College*

BALDWIN, JOHN H., D.V.M., 109 Jordan St., Skaneateles, N. Y.

Blaisdell, Edwin E., D.V.M., R.F.D. 1, Laconia, N. H.
Boerenko, Henry D., D.V.M., Galway, N. Y.
Brennan, John J., Jr., D.V.M., R.F.D. 2, Brewster, N. Y.
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Davidson, William A., D.V.M., 819 Pennsylvania Ave., Elmira, N. Y.
De Puy, Peter J., D.V.M., 16 Seward St., Dansville, N. Y.
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Duberman, Daniel, D.V.M., 1314 S. Division St., Peekskill, N. Y.
Durniak, Daniel, D.V.M., Germantown, N. Y.
Flannery, James J., D.V.M., Gardiner, N. Y.
Ford, Donald C., D.V.M., 527 Hyde Park Blvd., Niagara Falls, N. Y.
Fuess, Robert W., D.V.M., Riverbend Manor, Baldwinsville, N. Y.
Georgi, Marion E. S., D.V.M., c/o Schott, R. D. 1, Afton, N. Y.
Gorse, George E., D.V.M., 843 E. Tower Rd., Ithaca, N. Y.
Gourlay, James A., D.V.M., 133 Prospect Terrace, Altamont, N. Y.
Graff, Rodger F., D.V.M., R. F. D. 5, Lockport, N. Y.
Grano, Edward, Jr., D.V.M., Nannyhagen Rd., Thornwood, N. Y.
Grass, Albert E., D.V.M., Putney Rd., Brattleboro, Vt.
Greenstein, Edward T., D.V.M., Locust Hill, Forest Home, Ithaca, N. Y.
Greenwood, Albert R., D.V.M., Haubrich Veterinary Clinic, Claremont, N. H.
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Hoff, Edwin J., Jr., D.V.M., 222 Valley Rd., Ithaca, N. Y.
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Loomis, Wendell K., D.V.M., R. D. 4, Fulton, N. Y.
McCarthy, John B., D.V.M., Rt. 3, Brewster, N. Y.
McVicar, John W., D.V.M., Vergennes, Vt.
Marks, Herbert R., D.V.M., R. F. D. 1, Lowville, N. Y.
Martin, Robert S, D.V.M., 15 Powell Ave., Rockville Center, N. Y.
Milkey, Robert K., D.V.M., 52 Harding St., New Britain, Conn.
Myers, Charles L., D.V.M., R. D. 3, Ithaca, N. Y.
Paddock, Joseph E., D.V.M., S. Main St., Machias, N. Y.
Paquette, Ernest F., D.V.M., Upper Union St., Peterborough, N. H.
Pelham, Paul H., D.V.M., 521 Broadway St., Montour Falls, N. Y.
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Shupe, James L., D.V.M., Veterinary Science Department, Utah State College, Logan, Utah.
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Carter, Mark L., D.V.M., Siloam Springs, Ark.
Chandler, William J., D.V.M., Broken Arrow, Okla.
Clefisch, Glen G., D.V.M., Good Thunder, Minn.
Denney, H. Owen, D.V.M., Rt. 2, Stillwater, Okla.
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Doyle, Charles E., D.V.M., 523 N. W. 7th, Bethany, Okla.
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Fullerton, Fred J., D.V.M., 2507 Grove Circle, Little Rock, Ark.
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High, Arthur K., D.V.M., R. R. 1, Wellston, Okla.
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Hinderliter, Merlin V., D.V.M., Rt. 3, Portales, N. M.
Hobbs, Charles L., D.V.M., R. F. D. 4, Hennessey, Okla.
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Ohio State University*

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Oklahoma A. & M. College*

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BENTON, FRANK R., JR., D.V.M., 1134 E. 10th St., Tucson, Ariz.
BLEVINS, EDWARD L., D.V.M., 730 N. Davis St., Enid, Okla.
BRASHEAR, JAY H., D.V.M., Gettysburg, S. Dak.
HOWELL, HAROLD H., D.V.M., Prague, Okla.
HUTCHISON, WILLIAM S., D.V.M., Gen. Del., Woodward, Okla.
IVIE, HAROLD D., D.V.M., 1963 Capitol Ave., Palo Alto, Calif.
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RHYNES, WILLARD E., D.V.M., Rt. 1, Stonewall, Okla.
SEMPLE, ALLEN W., D.V.M., Durant, Okla.
SIMPSON, ROBERT E., D.V.M., 385 W. Wilson, Coolidge, Ariz.
SKOW, LLOYD C., D.V.M., c/o Paul Rivoire, Rt. 4, Gainesville, Texas.
THOMPSON, DON C., D.V.M., 911 S. Poplar, Bristow, Okla.
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VALENTINE, LAWRENCE H., D.V.M., Idabel, Okla.
WILEY, JOSEPH C., D.V.M., Wichita Dog & Cat Hospital, 1921 E. Douglas, Wichita, Kan.
YOUNG, RAYMOND D., D.V.M., Enid, Okla.

Ontario Veterinary College

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KELLY, H. HAMMOND, D.V.M., R. R. 1, Charlottetown, P. E. I.
MITTON, A. ROSS, D.V.M., Ontario Veterinary College, Guelph, Ont.
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University of Pennsylvania

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Texas A. & M. College

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BROWN, JAMES M., D.V.M., Box 378, Sulphur, Okla.
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CARROLL, T. G., D.V.M., Center, Texas.
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GOLDSTON, ROY P., D.V.M., 1431 N. Shepherd Dr., Houston, Texas.
GOODWIN, ROBERT J., D.V.M., General Delivery, Cleveland, Texas.
GREEN, WILLIAM W., D.V.M., Kenedy, Texas.
HARPER, JOHN L., JR., D.V.M., Rt. 12, Box 210, Fort Worth, Texas.
HART, JAMES C., JR., D.V.M., Rt. 1, Loraine, Texas.
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HOLCOMB, PAUL N., JR., D.V.M., 203 N. Church St., McKinney, Texas.
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Hubert, Patrick L., D.V.M., Rt. 1, Riviera, Texas.
Humphries, James E., D.V.M., Rt. 1, Annona, Texas.
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Kendrick, Gibney, Jr., D.V.M., Box 356, Rosebud, Texas.
Kutch, George F., D.V.M., Rt. 2, Gladewater, Texas.
Lewis, Richard G., D.V.M., 814 Pecos, San Angelo, Texas.
Lewis, William M., D.V.M., 1973 Santos, Abilene, Texas.
Lindsey, Gilbert D., D.V.M., 2610 Ave. I, Snyder, Texas.
McAda, William E., D.V.M., Rt. 1, Kenedy, Texas.
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Martin, James O., D.V.M., Box 651, Cotulla, Texas.
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Mode, William G., D.V.M., 504 E. 15th St., Cameron, Texas.
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Prewitt, J. Marvin, D.V.M., Taylor, Texas.
Ross, Warren B., D.V.M., Rt. 1, Box 160, Smithfield Texas.
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Terrell, Robert T., D.V.M., 2105 N. Main St., Paris, Texas.
Tobias, Olan G., D.V.M., Rt. 3, Box 162, Bryan, Texas.
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Weyerts, Paul R., D.V.M., Box 832, Alpine, Texas.
Wilson, Curtis L., Jr., D.V.M., Box 577, Comanche, Texas.
Witcher, Harold D., D.V.M., Windom, Texas.
Word, Joe M., D.V.M., %Mount, Edwards, and Whittington Dog and Cat Hospital, 769 Vance Ave., Memphis, Tenn.

Tuskegee Institute*

Butcher, Leonard V., D.V.M., Vide, Bouteille, Castries, St. Lucia, B.W.I.
Murfee, Dorsey E., D.V.M., Box 447, Warsaw, N. Car.

Washington State College

Allen, Paul H., D.V.M., Rt. 4, Box 114, Hood River, Ore.
Clizer, Wayne B., D.V.M., 613 N. Callow Ave., Bremerton, Wash.
Frost, Orville I., D.V.M., 615 W. 65th St., Moscow, Idaho.
Herriott, Robert L., D.V.M., 3732 Colby Ave., Everett, Wash.
Holloway, Howard K., D.V.M., Harlowton, Mont.
Keck, Walter C., D.V.M., 204 Cabot Rd., Everett, Wash.
Lancaster, Howard F., D.V.M., 1026 Mill St., Coeur d'Alene, Idaho.
Larson, Douglas K., D.V.M., 2022 E. 4th Ave., Olympia, Wash.
Leader, Robert W., D.V.M., 1900 B St., Pullman, Wash.
McIntosh, Gray I., D.V.M., Rt. 1, Lewiston, Idaho.
Perkins, Ralph H., D.V.M., 2030 W. Grandview, Tacoma 6, Wash.
Robertson, Darrel R., D.V.M., 7611 Wornall Rd., Kansas City 5, Mo.
Schmidt, John H., D.V.M., 305 S.E. 75 Ave., Portland 16, Ore.
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U. S. GOVERNMENT

Training Program Announced by Bureau of Animal Industry.—The chief of the Bureau of Animal Industry, Dr. B. T. Simms, has announced the inauguration of a training program for veterinarians in the lowest classification, GS-7, which will qualify these employees for service in the next classification and make possible their promotion in a shorter time. The program was announced in circular letter 413.2 dated June 20, 1952, and sent to all divisions and field stations.

Officials in charge will be responsible for the application of the program to all full-time GS-7 grade veterinarians under their jurisdiction. The directive states that all veterinarians presently employed in the GS-7 grade should be placed under the program immediately, and all veterinarians employed at this grade in the future should be placed under the program immediately upon entrance on duty. After completing the training program as outlined, the veterinarian in the grade GS-7 may be promoted to GS-9, provided a suitable opening is available.

If a position at the higher, GS-9 grade is not open at the veterinarian's present station, the official in charge is required to inform the Washington office whether the employee is in-

terested in accepting a transfer to obtain a promotion.

The training program, which is completely outlined, will provide experience in the following BAI functions: (1) meat inspection, (2) disease control and eradication, and (3) virus serum control. The course outlined will require six months of intensive training.

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Veterinary Personnel Changes.—The following changes in the force of veterinarians in the U. S. Bureau of Animal Industry are reported as of July 18, 1952.

NEW APPOINTMENTS

Edward L. Blevins, Ottumwa, Iowa.
William O. Bolton, Indianapolis, Ind.
Joseph D. Edens, Atlanta, Ga.
Ross E. Evans, Jacksonville, Fla.
Dexter T. Gabbard, Atlanta, Ga.
James D. Hatton, Reading, Pa.
Claude Hinckley, Davenport, Iowa.
Kenneth W. Irvin, Omaha, Neb.
James A. Jermier, Waterloo, Iowa.
Earl M. Jones, Moultrie, Ga.
Arthur L. Lewis, Detroit, Mich.
Robert Y. Lewis, Detroit, Mich.
Douglas M. Murray, St. Paul, Minn.
Robert P. Raemsch, Albany, N. Y.
William H. Rhodes, Jacksonville, Fla.
William E. Ribelin, Amsterdam, Holland.
Warren B. Ross, Little Rock, Ark.
Julius J. Schoeman, Chicago, Ill.
Carey W. Thornton, Jr., Montgomery, Ala.
James Varady, Los Angeles, Calif.
Raymond J. Widman, Columbus, Ohio.
William E. Wiseman, Columbus, Ohio.

CANCELLATIONS

Finis E. Hilton, Sacramento, Calif.
Arthur L. Lewis, Detroit, Mich.
Raymond J. Widman, Columbus, Ohio.
John H. Williams, Omaha, Neb.

DEATHS

Leonidas L. Denson, Nashville, Tenn.
Robert F. Wolfe, Des Moines, Iowa.

MILITARY FURLOUGHS

Harold C. Caudle, Nashville, Tenn.
Dorian Lugo-Rubio, San Juan, P. R.
Richard J. Unfer, Denver, Colo.
Saul F. Wilson, Columbus, Ohio.

RESIGNATIONS

Barry W. Allen, Fort Worth, Texas.
Sam H. Best, Jr., Oklahoma City, Okla.
Philip Bookman, New Haven, Conn.
John W. Chambers, Jr., Salt Lake City, Utah.
William Craig, South St. Joseph, Mo.
Christian F. Fisker, St. Paul, Minn.
Kenneth H. Fritts, Pierre, S. Dak.
Loy Jordan, Mexico City, Mex.
Miss Mary J. Malloy, Lansing, Mich.
Leon G. Montgomery, Sioux City, Iowa.
Robert J. Price, Columbus, Ohio.
Terrell B. Ryan, Augusta, Maine.
Alfred O. Severson, Eau Claire, Wis.
Vernon Ward, Boise, Idaho.
Frederick J. Weitz, Buffalo, N. Y.
Oscar Wennergren, Salt Lake City, Utah.

TERMINATION

Malcolm K. Anderson, St. Paul, Minn.

RETIREMENTS

Bert J. Cady, Augusta, Maine.
Edward A. Garleb, St. Louis, Mo.
Henry E. Gearhart, Oklahoma City, Okla.
Gerald C. Hine, San Francisco, Calif.
Malcolm R. Jollie, Evansville, Ind.
Rudolf F. Krenek, Sioux City, Iowa.
Clifford C. Robenstein, Denver, Colo.
Samuel C. Varnum, Madison, Wis.
Joseph S. Wolfram, Danville, Ill.

TRANSFERS

Ralph H. Benedict, from Detroit, Mich., to Milwaukee, Wis.
Clarence E. Bolton, from Mexico City, Mex., to Montpelier, Vt.
Glenn V. Grewell, from Seattle, Wash., to Clarkston, Wash.
Louis C. Heemstra, from Beltsville, Md., to Washington, D. C.
Aubrey M. Hutton, from Philadelphia, Pa., to New Haven, Conn.
Garnet M. Jones, from Salt Lake City, Utah, to San Diego, Calif.
Glen M. Lint, from Chicago, Ill., to Evansville, Ind.
Abby J. Logie, from San Francisco, Calif., to Philadelphia, Pa.
Francis J. Mulhern, from Yuma, Ariz., to Washington, D. C.
Albin G. Pass, from Frankfort, Ky., to Baton Rouge, La.
Jack W. Smartt, from Omaha, Neb., to Salt Lake City, Utah.
Ira M. Watts, from Cheyenne, Wyo., to Salt Lake City, Utah.
James A. Whealy, from Clarkston, Wash., to Seattle, Wash.
George T. Woodward, from Fort Worth, Texas, to Kerrville, Texas.

AMONG THE STATES AND PROVINCES

Alabama

Jefferson County Association.—The following officers were elected at the July 9 meeting of the Jefferson County Veterinary Medical Association: Drs. Howard Hayes, Bessemer, president; J. D. Nall, Birmingham, vice-president; and R. A. Kirby, Birmingham, secretary-treasurer.

Dr. W. B. Castleberry, retiring president, presided at the meeting.

s/R. A. KIRBY, *Secretary.*

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Death of Dr. I. S. McAdory.—Dr. Isaac Sadler McAdory, 70, professor of veterinary medicine in the School of Veterinary Medicine, Alabama Polytechnic Institute, died suddenly on July 5, 1952, following a heart attack. Born Aug. 13, 1882, at Pleasant Hill, Ala., he received his early education in Jefferson County high school, his B.S. degree from A.P.I. in 1904, and his D.V.M. from McKillip Veterinary College in 1908, which he entered in 1905 after having assisted the late Dr. C. A. Cary for two years in the Department of Veterinary Science at Alabama Polytechnic Institute.

Following his graduation from McKillip, Dr. McAdory returned to Auburn where he became instructor in anatomy and later in surgery, until 1935 when he became acting dean of the veterinary school and acting state veterinarian. Appointed dean and state veterinarian in 1937, he served in those capacities until 1940 when he was made professor of surgery and medicine

and associate state veterinarian. In the latter capacity, he took an active part in both tick and swine tuberculosis eradication in addition

Dr. I. S. McAdory

to the usual control work on other infectious and contagious livestock diseases in the state.

Dr. McAdory was always interested in athletics, having played four years of varsity football, and served on the athletic board at A.P.I. for many years. He was always active in professional circles, having been secretary-treasurer of the Alabama Veterinary Medical Association and the State Veterinary Medical Examining Board since 1935. He was president of the Southern V.M.A. in 1940 and of the U.S. Livestock Sanitary Association in 1942. He had represented his state association in the AVMA House of Representatives since its inception and was resident AVMA secretary for many years. He was also a member of the Masonic order and a Shriner, Order of the Eastern Star, White Shrine, Rotary Club, Alcazar, Alpha Psi fraternity, and Phi Zeta. Dr. McAdory is survived by his widow, Mrs. Cora McAdory; a daughter, Mrs. A. D. Lipscomb, of Auburn; a granddaughter, two grandsons, three great-grandchildren; two sisters and one brother. Funeral services were held at the Methodist Church, Auburn, on July 7, followed by the Masonic burial ceremony.

California

State Association.—The California State Veterinary Medical Association held its sixty-fourth annual meeting at Arrowhead Springs, California, June 16-18, 1952, and elected the following officers: Drs. A. R. Inman, Visalia, president; Oscar J. Kron, San Francisco, treasurer; Mr. Charles S. Travers, San Francisco, executive secretary; Drs. Paul D. DeLay, Sacramento, first vice-president; W. J. Zontine, Lancaster, second vice-president; A. M. McCapes, San Luis Obispo, third vice-president; and C. Edward Taylor, San Luis Obispo, sergeant-at-arms.

Out-of-state veterinarians who addressed the convention were **Drs. Jean Flint,** Salt Lake City, Utah; **Rue Jensen,** Colorado A. & M. College; and **Leon Kanegis,** Lederle Laboratory Division, Pearl River, N. Y.

Members of the association who participated in the program were **Drs. R. G. Collins,** Paso Robles; **R. L. Collinson,** Turlock; **E. M. Dobbs,** Los Angeles; **R. E. Duckworth,** Sacramento; **T. J. Hage,** Davis; **John W. Kendrick,** Davis; **L. R. Libby,** Sebastopol; **W. Maderious,** Madera; **Kenneth G. McKay,** Davis; **R. Ormsbee,** Stockton; **E. R. Quortrup,** San Diego; **Seymour Roberts,** Richmond; **W. E. Smith,** Sanger; **R. A. Stocking,** Los Angeles; **C. E. Wicktor,** Los Angeles; and **L. C. Witcosky,** Fresno.

Mrs. Margaret Bellue, Sacramento; **Dr. A. C. Hollister** (M.D.), Berkeley; **Dr. M. H. Merrill** (M.D.), Berkeley; and **Mr. Robert Sherwood** also spoke to the group.

s/CHARLES S. TRAVERS, *Executive Secretary.*

Colorado

Dr. Baum Accepts Position with State Health Department.—Dr. Martin D. Baum (COR '32) recently resigned from the Veterinary Division of the U. S. Public Health Service in order to accept the position of director of Veterinary Public Health Services with the Colorado State Department of Health, with headquarters in Denver.

Florida

Death of Dr. J. V. Knapp.—Dr. J. V. Knapp, 62, Tallahassee, for thirty years state veterinarian and the man who directed the eradication of the cattle fever tick from Florida, died on June 7 following an illness of several weeks.

Dr. J. V. Knapp

A native of Wellington, Ill., he received his D.V.M. degree from Colorado State College in 1911. After working for the federal Bureau of Animal Industry for several years during which he directed tick eradication in Dade and Broward counties, Dr. Knapp was appointed state veterinarian in 1922, and continued to direct the program in the state during the time that compulsory dipping of cattle was one of the hottest political issues of the day but was ultimately successful.

He was admitted to the AVMA in 1926 and was a past-president of the U. S. Livestock Sanitary Association (1948-49). He was prominent in civic club and Presbyterian church affairs in Tallahassee. Dr. Knapp is survived by his widow, Mrs. Harriet Watson Knapp, and two daughters, all of Tallahassee.

Georgia

State Association.—The Georgia Veterinary Medical Association held its forty-sixth annual meeting at the Hotel General Oglethorpe in Savannah on June 15-17, 1952, with more than 100 in attendance.

The out-of-state speakers were **Drs. S. J. Roberts,** New York State Veterinary College, Ithaca; **A. H. Craige,** Pitman-Moore Co., Indianapolis, Ind.; **George Ott,** Fromm Laboratories, Grafton, Wis.; **C. H. Poitevint,** Dothan, Ala.; and **R. E. Omohumdro,** Mexico D.F., Mex.

Other speakers included **Drs. A. M. Mills** and **R. W. Redding,** School of Veterinary Medicine, University of Georgia, Athens; **C. J. Mikel,** federal veterinarian in charge in Georgia; **G. C. Thornton, Jr.,** Atlanta; **J. C. Powell, Jr.,** Savannah; **W. D. Martin, Jr.,** Albany; **W. H. Peacock,** Waycross; **B. E. Carlisle,** Camilla; **J. T. Riddle,** Marietta; and **W. L. Sippel,** Tifton.

The following officers were elected: Drs. J. T. Riddle, Marietta, president; J. R. Clanton, Thomasville, president-elect; Chas. C. Rife, Atlanta, secretary-treasurer and editor.

s/CHAS. C. RIFE, *Secretary.*

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Dr. Tierkel on WHO Tour.—Dr. E. S. Tierkel, Atlanta, Ga., in charge of federal rabies control activities there, is on a three-month tour in Europe and Asia for the World Health Organization of the United Nations. After teaching at a two-week rabies conference of 30 nations at the Pasteur Institute, Coonoor, Madras, India, he will visit Burma, Thailand, Indonesia, Greece, Spain, and Berlin where his assistance has been requested. Dr. Tierkel made a similar tour a year ago at the request of several African and South Asian nations.

Illinois

Eastern Association.—The summer meeting of the Eastern Illinois Veterinary Medical Association was held June 12 at the Hotel Tilden-Hall in Champaign. Dinner was served to 69 members and guests.

President A. L. Starkey appointed Dr. W. G. Raudabaugh, Piper City, to represent the Association at the session on ethics at the AVMA meeting in Atlantic City.

A resolution was introduced and approved unanimously calling for acceptance for show and sales purposes of swine vaccinated with the new modified live virus vaccines for hog cholera. The resolution was forwarded to the superintendent of the Division of Livestock Industry with copies to the presidents of all sectional associations in the state.

Dr. Sisk, of Mansfield, was approved as a lifetime member of the Association without dues.

Dr. J. B. Herrick, extension veterinarian, Iowa State College, showed the motion picture "The Functional Anatomy of the Reproductive Tract of the Cow," and discussed "Clinical Aspects of Bovine Sterility and Infertility."

s/GEORGE T. WOODS, *Secretary.*

Indiana

Dr. and Mrs. Spivey Celebrate Golden Wedding.—Dr. (IND '12) and Mrs. A. C. Spivey of Thorntown, with the help of their family and friends, celebrated their golden wedding anniversary in April at a banquet in their honor in the Marott Hotel in Indianapolis.

s/J. L. KIXMILLER, *Resident Secretary.*

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Tenth District Association.—On July 17, the Tenth District (Ind.) Veterinary Medical Association met in Cumberland. **Dr. T. K. Jones,** Indianapolis, BAI inspector in charge in Indiana, asked the coöperation of all veterinarians finding suspicious cases of vesicular exanthema in reporting such findings to his office or that of the state veterinarian. **Dr. A. H. Craige,** of Indianapolis, spoke on "Milk Fever and Acetonemia in the Dairy Cow."

Dr. and Mrs. R. A. Showalter were hosts to the group.

s/J. L. KIXMILLER, *Resident Secretary.*

Iowa

Field and Sports Day for Veterinarians.—The annual stag field day for veterinarians and those closely affiliated with the profession, which is sponsored by the Iowa Veterinary Medical Association, with the Eastern Iowa Veterinary Medical Association as host, was held July 29 at the Elmcrest golf and country club in Cedar Rapids. Among the events of the day were a golf tournament and contests in driving, cribbage, trap shooting, putting, and horseshoes.

s/C. C. TUCKER, *Chairman.*

Minnesota

Staff Appointments at the University of Minnesota.—The following veterinarians have

joined the staff of the School of Veterinary Medicine at the University of Minnesota. Dr. Donald H. Clifford (MON '50), formerly on the staff at the Angell Memorial Animal Hospital, Boston, joined the clinic staff as an instructor in small animal medicine. Dr. Finis E. Hilton (OKL '52) has accepted appointment as an instructor in the Department of Pathology; and Dr. John T. Bell (GA '52) joined the Department of Anatomy as an instructor. Early in July, Dr. Charles Gale (MSC '52) became assistant veterinarian in the veterinary diagnostic laboratory.

s/HENRY J. GRIFFITHS, *Resident Secretary.*

Missouri

Kansas City Association.—On July 15, members of the Kansas City Veterinary Medical Association met in the Hotel Continental to hear **Dr. Andrew W. Uren,** School of Veterinary Medicine, University of Missouri, discuss "Involution of the Uterus Following Parturition." **Dr. C. C. Foulk,** Spring Hill, Kan., also addressed the group; and a motion picture "Brucellosis in Swine" was shown.

s/K. MAYNARD CURTS, *Secretary.*

New Jersey

New Practice Act Enacted in New Jersey.—A new law governing the practice of veterinary medicine in New Jersey was enacted recently. This act is not new only for the state of New Jersey but is also "new" in form.

First of all, the practice of veterinary medicine is declared a *profession* in the act. Reports from officers of the Veterinary Medical Association of New Jersey indicate that this was in itself a significant accomplishment. Not that the people of New Jersey do not recognize veterinarians as professional men but because there are a number of other state statutes applying to professions. Now that veterinary medicine has been legally defined as a profession, they will help to control illegal practice and enforce the provisions of the act against violators.

Second, the act also defines how a veterinarian may "advertise." The act specifically states that advertising will be limited to the following: (1) "Appointment cards . . . limited to time and place of appointment . . . as permitted on the professional card"; (2) "the name of the licensee . . . shall be displayed on the premises where the practice . . . is conducted and all information displayed shall be limited to that of a professional card . . . containing only the name of the licensee . . . the title or degree, office hours, and telephone number"; (3) "it shall be unlawful . . . to advertise falsely . . . or to announce his name in any city, telephone, commercial or other public directory . . . or office building in boldface type or type that is in any way dissimilar in size, shape, or color to that used by other practitioners of the healing arts in the same directory."

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Metropolitan Association.—The Metropolitan New Jersey Veterinary Medical Association held its second annual election on June 18 and the following officers were elected for the 1952-1953 year: Drs. W. Philip Boyer, Morris Plains, president; Sydney Rosenberg, Newark, vice-president; and Myron S. Arlein, Maplewood, secretary-treasurer. A formal constitution was also adopted at this meeting. The Association has a membership of approximately 60.

s/MYRON S. ARLEIN, *Secretary.*

New York

Dr. Goss Named Assistant Director of Zoological Park.—Dr. Leonard J. Goss (OSU '34) has been made assistant director of the New York Zoological Park where he has served as veterinarian since 1939. Mr. John Tee-Van, executive secretary of the Park since 1942, was named director.

Dr. Goss will continue as head of the veterinary department, and will be assisted by Dr. Charles P. Gandal, who received his D.V.M. degree from the New York State Veterinary College in 1951.

Before coming to the New York Zoo in 1939, Dr. Goss was connected with the Kentucky Agricultural Experiment Station at Lexington and later was an instructor in the New York State Veterinary College at Cornell University, from which he received his Ph.D. degree in 1948.

North Carolina

Central Association.—The Central Carolina Veterinary Medical Association met in Greensboro on July 9 at the O'Henry Hotel. **Dr. J. W. Peace, Jr.,** High Point, presented an interesting paper on "Heart Diseases, Their Syndrome, Diagnosis, and Treatment," with a recording of various heart sounds.

The following officers were elected at this meeting: Drs. B. J. Lindley, Winston Salem, president; J. A. Jordan, Lexington, vice-president; J. W. Peace, High Point, treasurer; and Mr. Earl D. Adams, Greensboro, secretary.

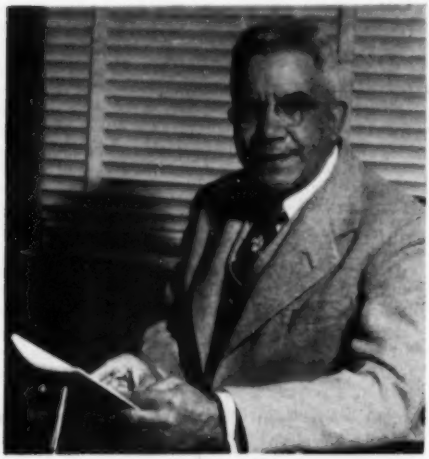
s/CLYDE W. YOUNG, *Resident Secretary.*

Texas

Dr. E. B. Evans Honored.—In an article on the Texas A. & M. System, *The Cattleman* (Fort Worth, Texas) states that Dr. Edward B. Evans, president of the Negro school, Prairie View A. & M. College, was recently awarded the Silver Antelope, scouting's highest award, for his long active service with boy scouts. A division of the Buffalo Trails Council of Boy Scouts of America was also named in his honor.

Honors are no stranger to Dr. Evans. He

graduated with honors from the Division of Veterinary Medicine, Iowa State College, in 1918. He established the Department of Vet-



Dr. E. B. Evans

erinary Science at Prairie View College in 1918 and has since served the school in various capacities, such as director of athletics, registrar, and state leader of cooperative extension work. He transferred his activities to Tuskegee Institute in 1945 where, as its first dean, he planned the buildings and organized the faculty for their fine new veterinary school.

In 1946, he returned to Prairie View, the third largest Negro college in the nation. He served this past year as president of the Negro Land-Grant College Presidents' Association. He was admitted to membership in the American Veterinary Medical Association in 1951.

Vermont

Conference for Veterinarians.—The Vermont Veterinary Medical Association and the University of Vermont and State Agricultural College (Department of Animal Pathology) presented the fifth annual conference for veterinarians on June 16-17, 1952, at the Hill's Science Building, University of Vermont, Burlington.

The following guest speakers appeared on the scientific program: **Drs. G. E. Brightenback,** Montpelier; **John Canty,** state veterinarian and chief of livestock, Department of Agriculture, Montpelier; **Dean J. E. Carrigan,** College of Agriculture, director of the Vermont Agricultural Experiment Station and extension service; **Drs. M. G. Fincher,** New York State Veterinary College, Cornell University, Ithaca; **D. F. Icken,** Fair Haven; **Kenneth McEntee,** New York State Veterinary College, Cornell University, Ithaca; **S. W. Stiles,** Falmouth Foreside, Maine; **J. E. Wheeler,** president of the Vermont Veterinary Medical Association; and Commissioner **S. G. Judd,** Department of Agriculture, Montpelier.

The following members of the University of Vermont faculty participated in the planning and presentation of the program: **Drs. W. D. Bolton, W. B. Durrell,** and **J. R. Wadsworth.**

One of the high points of the conference was a cruise and buffet supper aboard the "Ticonderoga" on Lake Champlain. Other social activities included a social hour, a buffet dinner, and a garden party.

s/W. D. BOLTON, *Secretary.*

Wisconsin

Conference for Veterinarians.—The University of Wisconsin postgraduate conference for veterinarians was held at the University on July 22-23, 1952.

This conference was rather unique in that the first morning session was devoted to short, concise reports on the highlights of a variety of research projects which are being carried on by members of the staff and graduate students. Thirteen such reports were made in two hours. A surprising amount of up-to-the minute information on veterinary research was thus made available with a real economy of time. The final hour of the first session was devoted mostly to case reports illustrated by slides or motion pictures.

The guest speakers at the later sessions included: **Mr. Paul C. Johnson,** editor of "Prairie Farmer"; **Professor Arthur Pope,** Department of Animal Husbandry; **Drs. P. T. Engarde,** Marysville, Ohio; **W. R. Pritchard,** University of Minnesota; **F. A. Todd,** U. S. Public Health Service; **W. A. Aitken,** editor-in-chief of the AVMA publications; **G. R. Hartsough,** New Holstein, Wis.; **Professor R. K. Meyer,** Department of Zoölogy; **Drs. E. B. Ingmand,** Red Oak, Iowa; **Jesse Sampson,** University of Illinois; **A. G. Meisner,** Chicago; and **L. E. Boley,** University of Illinois.

A highlight of the program was an address by **Governor Walter J. Kohler** of Wisconsin.

The final session of the conference was devoted to clinical demonstrations and exhibits featuring modern tuberculin testing facilities which were discussed by **Dr. H. W. Johnson,** U. S. Department of Agriculture, Washington, D. C.

s/W. A. AITKEN.

Wyoming

State Association.—The Wyoming State Veterinary Medical Association held an enjoyable meeting at Saratoga on July 13-15, 1952.

The following speakers comprised the program: **Drs. H. E. Downing,** Chas. Pfizer Co., Brooklyn, N. Y.; **Frank J. Milne, H. J. Hill,** and **Rue Jensen,** Colorado A. & M. College,

Fort Collins; **James A. Barrington,** Wichita Falls, Texas; **Gail E. Hawley,** Glendive, Mont.; **W. L. Boyd,** St. Paul, Minn., president of the AVMA; **Lewis E. Harris,** Norden Laboratories, Lincoln, Neb.; and **E. S. Norton,** Lander, Wyo.

At the business meeting, a number of men voiced their disapproval of socialized medicine and expressed concern over the exportation of cattle from the western states without proper inspection, because of the possibility of thus rapidly disseminating foot-and-mouth disease should it unknowingly spread to the range country.

Officers elected for the coming year were: Drs. G. N. Glover, Torrington, president; J. E. English, Cody, vice-president; J. F. Ryff, Laramie, secretary-treasurer; and H. L. Stoddard, Laramie, member of the executive board along with Past-President R. E. Pierson, Saratoga, and President G. N. Glover.

s/J. F. RYFF, *Secretary.*

VETERINARY MILITARY SERVICE

Lt. Col. Harold F. Beadner Awarded Bronze Star.—Lieutenant Colonel Harold F. Beadner (WSC '39), V.C., U. S. A. F., has recently been awarded the Bronze Star Medal. He received the award while on duty in Okinawa with the 20th Air Force for "meritorious service in connection with military operations against an enemy during July, 1950, to July, 1952."

Colonel Beadner will attend the University of Michigan at Ann Arbor this fall to study for his masters degree in public health.

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Colonel Miller Attending Air War College.—Lieutenant Colonel Robert R. Miller, V.C., U.S.A.F., has been selected to attend the Air War College, Air University, Maxwell Air Force Base, Ala. The course, a year in duration, began on Aug. 18, 1952. Colonel Miller was reassigned from the office of the inspector general where he was the inspector general for the Veterinary Service, U.S.A.F.

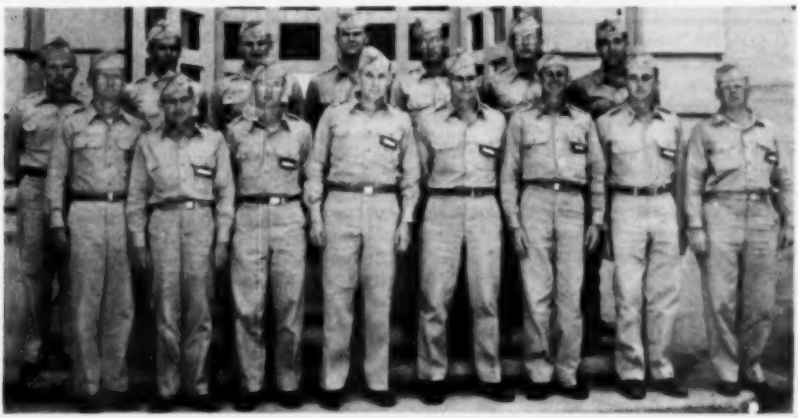
FOREIGN NEWS

India

Dr. Tansanguan Visitor at AVMA Office.—Dr. T. Tansanguan, a graduate of the veterinary school at Madras, India, in 1938, visited the AVMA office on July 15. A teacher of bacteriology at the veterinary school at Bangkok, Thailand, he is on a six-month tour of health departments and veterinary schools in the United States.

Philippine Islands

Dr. Gomez Granted WHO Fellowship.—Dr. Angel K. Gomez, dean and professor at the



Veterinary Corps Officers of the Medical Military Orientation Class (June 21, 1952) at the Medical Field Service School, Brooke Army Medical Center, Fort Sam Houston, Texas.
First row (left to right)—Lt. W. I. Gay, Cornell University; Capt. Ernest J. Wilson, Ohio State University; Capt. Gill, University of Pennsylvania; Col. W. E. Jennings, director, Department of Veterinary Service, Medical Field Service School; Capt. S. R. Orcutt, University of Pennsylvania; Capt. G. W. Cofer, Alabama Polytechnic Institute; Capt. D. R. Gross, Kansas State College; and Capt. C. A. Baird, Iowa State College.
Second row—Lt. R. R. Sigler, Ohio State University; Lt. J. R. Church, University of Pennsylvania; Lt. R. W. Stokstill, Ohio State University; Capt. M. W. Colton, Michigan State College; Lt. D. W. Ashcraft, Ohio State University; Lt. G. J. Jansen, Michigan State College; and Capt. A. F. Alexander, University of Minnesota.

College of Veterinary Medicine, University of the Philippines, has been granted a WHO fellowship in veterinary public health. He will

Dr. Angel K. Gomez

visit research laboratories for diseases of animals transmissible to man and will study the veterinary public health programs of important cities in the United States. He will also study the recent advances in veterinary medical education in various American veterinary colleges. Dr. Gomez is the first Filipino veterinarian granted this kind of fellowship in the Far Eastern region.

s/JOSE B. ARANEZ,
Foreign Corresponding Secretary.

MARRIAGE

Dr. (COP '50) Svend Woge Nielsen, resident in pathology at the Angell Memorial Animal Hospital, Boston, Mass., to Dr. (MSC '47) Lorraine C. Beaman, Dorchester, Mass., on July 18, 1952, in Boston.

BIRTHS

Dr. (KSC '47) and Mrs. Otto F. Luke, Lebanon, Kan., announce the birth of a son, Charles William, on May 7, 1952.

Dr. (KSC '42) and Mrs. Richard A. Shea, Brawley, Calif., announce the birth of their second son, Charles Dana, on May 14, 1952.

Dr. (KSC '50) and Mrs. Bernard F. Mowery, Auburn, Neb., announce the birth of a daughter, Kathleen Sue, on June 27, 1952.

Dr. (UP '44) and Mrs. James R. Wadsworth, Burlington, Vt., announce the birth of a daughter, Ann Christine, on July 1, 1952.

DEATHS

★**Otto W. Beiersdorf** (CVC '15), 64, Milford, Mass., died July 20, 1952. A native of Germany, Dr. Beiersdorf came to this country as a child and settled in North Dakota where he later became well-known as an outstanding athlete. In addition to his D.V.M. degree, he also earned the A. M. and M. D. degrees. He had practiced in Milford for thirty years and was a member of the various Masonic branches in Milford, and of the Massachusetts State and New England Veterinary Medical Associations, and had served as a veterinarian with the Army in World War I.

Dr. Beiersdorf was admitted to the AVMA in 1927. He is survived by his widow and a daughter.

★**Ben H. Borman** (CVC '16), 60, Milwaukee, Wis., died July 10, 1952. Dr. Borman was state veterinarian in Wisconsin for nineteen years, a post he left in 1942 to operate the Lakeside Animal Hospital in Milwaukee. He is survived by his widow, three sons, and two daughters. Dr. Borman was a member of the Wisconsin State and Milwaukee County Veterinary Medical Associations and of the AVMA.

★**George Bradbury, Jr.** (KSC '51), 31, Excelsior Springs, Mo., died July 9, 1952. Dr. Bradbury served overseas nineteen months during World War II as a first lieutenant in the Army. He is survived by his widow, one son, a brother, two sisters, and his parents. Dr. Bradbury was a member of the AVMA.

★**Guy Edward Chesley** (UP '98), 80, Rochester, N. H., died in October, 1951. Dr. Chesley was federal veterinary inspector for New Hampshire. He was a member of the New Hampshire and Eastern New England Veterinary Medical Associations and of the AVMA.

★**George L. Clark** (ONT '05), 68, Columbia City, Ind., died July 11, 1952, after several years of failing health. After receiving his D.V.M. degree, Dr. Clark joined his father in practice in Columbia City; recently Drs. M. M. Coble and Clark Waterfall, his nephew, entered practice with him. He was an active member of the Indiana State and Northeastern Indiana Veterinary Medical Associations and was president of the state association in 1947. During World War II, he was a member of the Board of Procurement and Assignment of veterinarians in the state, and more recently was chairman of the state National Security Resources Board.

Dr. Clark is survived by his widow, two daughters, and three grandchildren. He was admitted to the AVMA in 1933.

★**Jean V. Knapp** (COL '11), 62, Tallahassee, Fla., died June 6, 1952. Dr. Knapp was a member of the AVMA. An obituary appears on page 231 of this issue of the JOURNAL.

★**Walter L. Lindsey** (API '43), 32, Abingdon, Va., was killed accidentally on a hunting trip on Sept. 18, 1951. Dr. Lindsey is survived by his widow and a son and a daughter. He was admitted to the AVMA in 1943.

★Indicates members of the AVMA.

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COMING MEETINGS

Notices of Coming Meetings must be received by 4th of month preceding date of issue

Canadian Veterinary Medical Association. Fourth annual convention. The Algonquin, St. Andrews by-the-sea, New Brunswick, Canada, Sept. 15-17, 1952. A. B. Wickware, 1031 Carling Ave., Ottawa, Canada, executive secretary.

Northern Illinois Veterinary Medical Association. Annual fall meeting. Hotel Faust, Rockford, Ill., Sept. 17, 1952. L. W. Derrer, Mount Carrol, Ill., secretary.

Purdue University. Annual short course for veterinarians. Purdue University, Lafayette, Ind., Oct. 1-3, 1952. L. M. Hutchings, Purdue University, chairman, short course committee.

Missouri annual short course for graduate veterinarians. University of Missouri, Columbia, Mo., Oct. 6-7, 1952. Cecil Elder, School of Veterinary Medicine, University of Missouri, Columbia, Mo., chairman.

New England Veterinary Medical Association. Annual meeting. Mt. Washington Hotel, Breton Woods, N. H., Oct. 6-7, 1952. Wilson R. Haubrich, Claremont, N. H., secretary.

Pennsylvania State Veterinary Medical Association. Annual meeting. Pocono Manor Inn, Pocono Manor, Pa., Oct. 7-10, 1952. Dr. R. C. Snyder, Walnut St. and Copley Rd., Upper Darby, Pa., secretary.

Eastern Iowa Veterinary Association. Annual meeting. Montrose Hotel, Cedar Rapids, Iowa, Oct. 9-10, 1952. N. R. Waggoner, Olin, Iowa, secretary.

South Central Texas Veterinary Association. Annual meeting. Gunter Hotel, San Antonio, Texas, Oct. 11, 1952. G. W. Parker, 1619 Pleasanton Road, San Antonio, Texas, secretary.

West Virginia Veterinary Medical Association. Annual meeting. Kanawha Hotel, Charleston, W. Va., Oct. 12-13, 1952. Elvin R. Coon, Room 98 Capitol Building, Charleston 5, W. Va., secretary.

South Dakota Veterinary Medical Association. Annual meeting. Sioux Falls, S. Dak., Oct. 16-17, 1952. R. M. Scott, 2419 S. Main St., Sioux Falls, S. Dak., secretary.

American Public Health Association. Annual meeting. Public Auditorium, Cleveland, Ohio, Oct. 20-24, 1952. Dr. Reginald M. Atwater, American Public Health Association, 1790 Broadway, New York, N. Y., executive secretary.

Minnesota, University of. Annual short course. University Farm, St. Paul, Minn., Oct. 23-24, 1952. J. P. Arnold, University of Minnesota, chairman of short course committee.

United States Livestock Sanitary Association. Annual meeting. Hotel Seelbach, Louisville, Ky., Oct. 29-31, 1952. R. A. Hendershott, 1 West State St., Trenton 8, N. J., secretary. Copies of the Annual Proceedings of the U. S. L.S.A. are available at $5 per copy.

Southern Veterinary Medical Association. Annual meeting. Hotel Heidelberg, Jackson, Miss., Nov. 17-19, 1952. A. A. Husman, Raleigh, N. Car., secretary.

Animal Care Panel. Annual meeting. University of Illinois, Chicago Professional Colleges, Chicago, Ill., Dec. 3-4, 1952. Bennett J. Cohen, Northwestern University Medical School, 303 E. Chicago Ave., Chicago 11, Ill., secretary.

New York State Veterinary College. Annual conference for veterinarians. New York State Veterinary College, Cornell University, Ithaca, N. Y., Jan. 7-9, 1953. W. A. Hagan, dean.

Oklahoma Veterinary Medical Association. Annual meeting. Biltmore Hotel, Oklahoma City, Okla., Jan. 12-13, 1953. Lewis H. Moe, Oklahoma A. & M. College, Stillwater, Okla., secretary.

Indiana Veterinary Medical Association. Annual meeting. Hotel Severin, Indianapolis, Ind., Jan. 14-16, 1953. W. W. Garverick, Zionsville, Ind., secretary.

Intermountain Veterinary Medical Association. Annual meeting. Newhouse Hotel, Salt Lake City, Utah, Jan. 19-21, 1953. H. F. Wilkins, Montana Livestock Sanitary Board, Helena, Mont., chairman, program committee.

Minnesota State Veterinary Medical Society. Annual meeting. Nicollet Hotel, Minneapolis, Minn., Jan. 26-28, 1953. B. S. Pomeroy, St. Paul 1, Minn., secretary.

California State Veterinary Medical Association. Midwinter Annual meeting, Davis, Calif., Jan. 26-28, 1953. W. J. Zontine, 1014 Yucca Ave., Lancaster, Calif., program chairman.

(Continued on p. 30)

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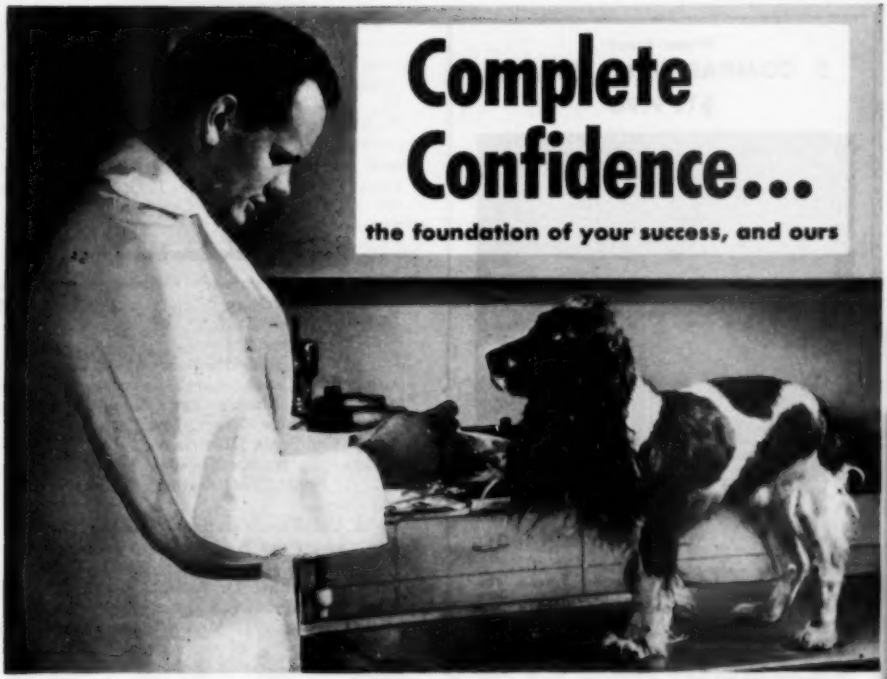

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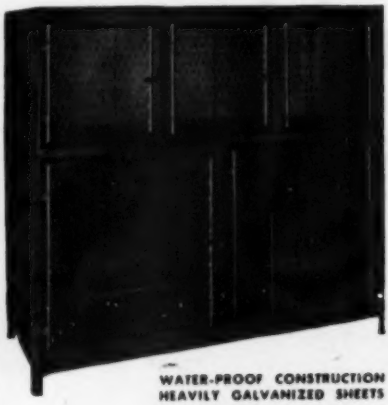

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(COMING MEETINGS—*Continued from p. 28*)

Illinois State Veterinary Medical Association. Annual meeting. Hotel Sherman, Chicago, Ill., Jan. 28-30, 1953. A. G. Misener, 6448 North Clark St., Chicago 26, Ill., secretary.

American Veterinary Medical Association. Annual meeting. Royal York Hotel, Toronto, Canada, July 20-23, 1953. J. G. Hardenbergh, 600 S. Michigan Ave., Chicago 5, Ill., executive secretary.

Regularly Scheduled Meetings

Bay Counties Veterinary Medical Association, the second Tuesday of each month. Richard L. Stowe, 149 Otsego Ave., San Francisco, Calif., secretary.

Cedar Valley Veterinary Association, the second Monday of each month (except July and August) at Black's Tea Room, Waterloo. F. E. Brutsman, Traer, Iowa, secretary.

Central California Veterinary Medical Association, the fourth Tuesday of each month. W. E. Smith, 516 Oatman, Sanger, Calif., secretary.

Central Carolina Veterinary Medical Association, the second Wednesday of each month at 7:00 p.m. in the O'Henry Hotel in Greensboro. Mr. Earl D. Adams, Greensboro, N. Car., secretary.

Chicago Veterinary Medical Association, the second Tuesday of each month. Robert C. Glover, 1021 Davis St., Evanston, Ill., secretary.

Coon Valley Veterinary Association, the second Wednesday of each month, September through May, at the Bradford Hotel, Storm Lake, Iowa. V. D. Ladwig, Sac City, Iowa, secretary.

Cuyahoga County (Cleveland, Ohio) Veterinary Medical Association, the first Wednesday of each month—September through May (except January)—at 9:00 p.m. at the Carter Hotel, Cleveland, Ohio. Roger W. Grundish, 4217 Mayfield Road, South Euclid 21, Ohio, secretary.

East Bay Veterinary Medical Association, bimonthly, the fourth Wednesday. Robert Clemens, 23352 Orchard, Hayward, Calif., secretary.

Fayette County Veterinary Association, Iowa, the third Tuesday of each month, except in July and August, at Pa and Ma's Restaurant, West Union, Iowa. Donald E. Moore, Box 178, Decorah, Iowa, secretary.

Florida, North-East Florida Veterinary Medical Association, the second Thursday of each month, time and place specified monthly. J. O. Whiddon, 829 San Marco Blvd., Jacksonville, Fla.

Greater St. Louis Veterinary Medical Association. Ralston-Purina Research Building, St. Louis, Mo., the first Friday in February.

(*Continued on p. 32*)

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(COMING MEETINGS — *Continued from p. 30*)

April, June, and November. W. C. Schofield, Dept. of Animal Pathology, Ralston-Purina Co., St. Louis 2, Mo., secretary.

Houston Veterinary Medical Association, Houston, Texas, the first Thursday of each month. Edward Lepon, Houston, Texas, secretary-treasurer.

Illinois Valley Veterinary Medical Association, the second Sunday evening of even-numbered months at the Jefferson Hotel, Peoria, Ill. S. M. McCully, Lacon, Ill., secretary.

Indiana Tenth District Veterinary Medical Association, third Thursday of each month. L. A. Snider, New Palestine, Ind., secretary.

Jefferson County Veterinary Society of Kentucky, Inc., the first Wednesday evening of each month, in Louisville or within a radius of 50 miles. F. M. Kearns, 3622 Frankfort Ave., Louisville 7, Ky., secretary.

Kansas City Small Animal Hospital Association, the first Monday of each month, at the Hotel Continental. T. M. Eagle, Parkville, Route 2, Mo., secretary.

Kansas City Veterinary Medical Association, the third Tuesday of each month, in the Hotel Continental, 11th and Baltimore, Kansas City, Mo. K. M. Curts, 70 Central Ave., Kansas City 18, Kan., secretary.

Kern County Veterinary Medical Association, the first Thursday of each month. Richard A. Stiern, 17 Niles St., Bakersfield, Calif., secretary.

Keystone Veterinary Medical Association, the Philadelphia County Medical Society Building, 301 S. 21st Street, Philadelphia, Pa., on the fourth Wednesday of each month. Raymond C. Snyder, 39th and Woodland Ave., Philadelphia 4, Pa., secretary.

Kyowva Veterinary Medical Association, the second Thursday of each month in the Hotel Prichard, Huntington, W. Va., at 8:30 p.m. Karl Mayer, 1531 Fourth Ave., Huntington, W. Va., secretary.

Maricopa County Veterinary Association, the second Tuesday of each month. Charles J. Prchal, 1722 East Almeria Road, Phoenix, Ariz., secretary.

Metropolitan New Jersey Veterinary Medical Association, the third Wednesday evening of each month from September through May, at the Academy of Medicine of Northern New Jersey, 91 Lincoln Park South, Newark, N. J. Myron S. Arlein, 2172 Millburn Ave., Maplewood, N. J., secretary.

Michiana Veterinary Medical Association, the second Thursday of each month. Write M. L. Livingston, Hartford, Mich., secretary, for location.

(*Continued on p. 34*)

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*Noland, P. R.; Tucker, D. L., and Stephenson, E. L.: Subcutaneous Implantation of Bacitracin in Pellet Form to Stimulate Growth of Suckling Pigs. Station Bulletin, Report Series 34, University of Arkansas, Fayetteville.

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(COMING MEETINGS—*Continued from p. 32*)

Michigan, Southeastern Veterinary Medical Society. Herman Kiefer Hospital, Detroit, Mich., the second Wednesday of each month from October through May.

Mid-Coast Veterinary Medical Association, the first Thursday of every even month. C. Edward Taylor, 2146 S. Broad St., San Luis Obispo, Calif., secretary.

Milwaukee Veterinary Medical Association. Wisconsin Humane Society, 4150 N. Humbolt Ave., Milwaukee, Wis., the third Tuesday of each month. Kenneth G. Nicholson, 2161 N. Farwell Ave., Milwaukee, Wis., secretary.

Mobile-Baldwin Veterinary Medical Association, the first Tuesday of each month at the Hotel Admiral Simmes, Mobile, Ala. C. Eric Kennedy, Mobile, Ala., secretary.

Monterey Bay Area Veterinary Medical Association, the third Wednesday of each month. C. Edward Taylor, 2146 South Broad St., San Luis Obispo, Calif., secretary.

New Castle County Veterinary Society, the second Wednesday of each month at 9:00 p.m. in the Hotel Rodney, Wilmington, Del. Harold Roberts, Paper Mill Road, Newark R3, Del., secretary.

New York City, Veterinary Medical Association of, the first Wednesday of each month at the New York Academy of Sciences, 2 East 63 St., New York City. C. R. Schroeder, Lederle Laboratories, Inc., Pearl River, N. Y., secretary.

Northern New Jersey Veterinary Association, the fourth Tuesday evening from September through June, at the Casa Mana Restaurant, Cedar Lane, Teaneck, N. J. Robert R. Shomer, 1680 Teaneck Road, N. J., secretary.

Northern San Joaquin Valley Veterinary Medical Association, the fourth Wednesday of each month. Tom Hagan, Gen. Del., Escalon, Calif., secretary.

Orange Belt Veterinary Medical Association, the second Monday of each month. Clark Stillinger, 1742 E. Holt Ave., Pomona, Calif., secretary.

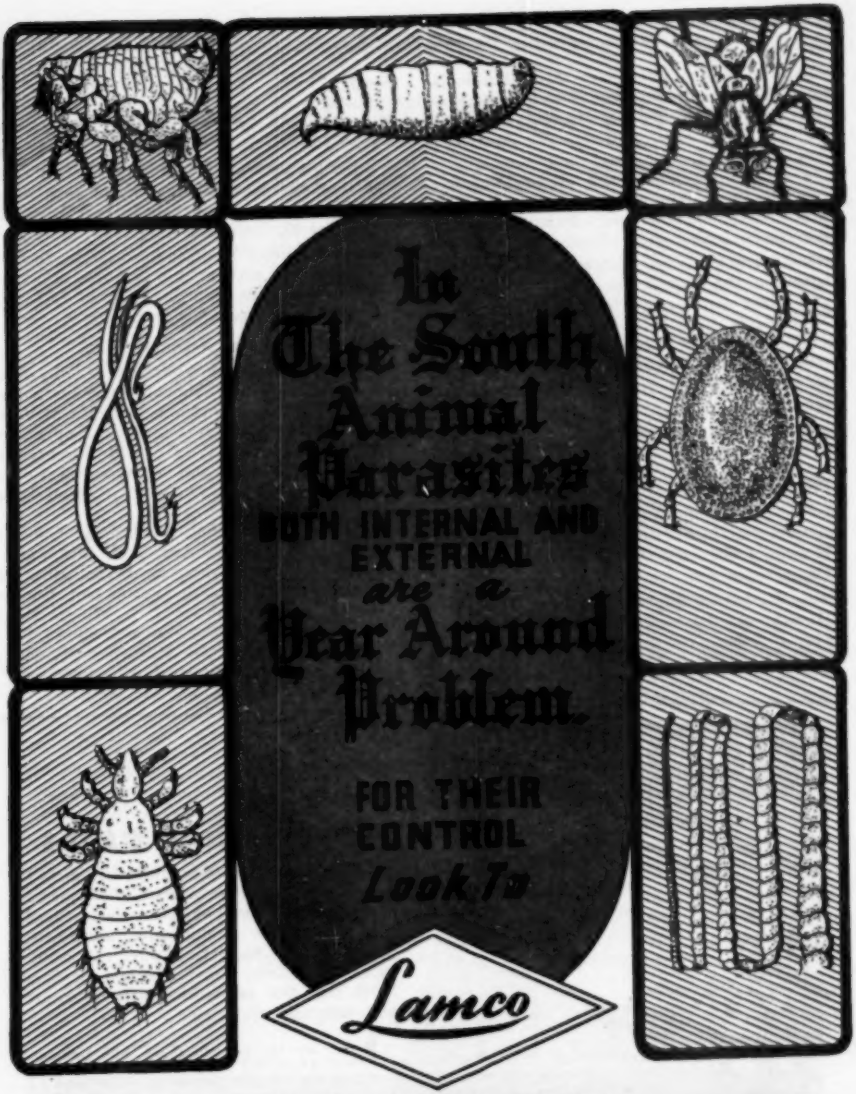
Orange County Veterinary Medical Association, bi-monthly. Donald E. Lind, 2643 N. Main, Santa Ana, Calif., secretary.

Peninsula Veterinary Medical Association, the third Monday of each month. P. H. Hand, Box 1035, Millbrae, Calif., secretary.

Piedmont Veterinary Medical Association, the last Friday of each month at 7:00 p.m. in Mull's Motel in Hickory, N. Car. C. N. Copeland, Hickory, N. Car., secretary.

Pima County (Arizona) Veterinary Medical Association, the third Wednesday of each month, in Tucson. R. W. Adami, 2103 S. 6th Ave., Tucson, Ariz., resident secretary.

(*Continued on p. 36*)



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(COMING MEETINGS—*Continued from p. 34*)

Portland (Oregon) Veterinary Medical Association, the second Tuesday of each month, in the Auditorium of the Upjohn Company. Robert L. Hawley, 1001 N. W. Fourteenth Ave., Portland, Ore., secretary.

Redwood Empire Veterinary Medical Association, the third Thursday of each month. John McChesney, 40 6th St., Petaluma, Calif., secretary.

Roanoke-Tar (N. Car.) Veterinary Medical Association, the first Friday of each month, time and place specified monthly. B. H. Brow, Weldon, N. Car., secretary.

Sacramento Valley Veterinary Medical Association, the second Wednesday of each month. S. M. Foster, 430 College, Woodland, Calif., secretary.

Saginaw Valley Veterinary Medical Association, the last Wednesday of each month. H. W. Harper, Flint Health Department, Flint, Mich., secretary.

San Diego County Veterinary Medical Association, the fourth Tuesday of each month. Warren J. Dedrick, 904 S. Lemon, El Cajon, Calif., secretary.

Santa Barbara-Ventura Counties Veterinary Medical Association, the second Friday of even months. Joe Ridgway, 1784 Thompson Blvd., Ventura, Calif., secretary.

South Florida Veterinary Society, the third Tuesday of each month, 8:00 p.m., at the Peckway Skeet Club, Robert P. Knowles, 2936 N.W. 17th Ave., Miami, Fla., secretary.

Southern California Veterinary Medical Association, the third Wednesday of each month. R. W. Sprowl, 11756 San Vicente Blvd., Los Angeles 49, Calif., secretary.

Tulsa Veterinary Medical Association, the third Thursday of each month, in Director's Parlor of the Brookside State Bank, Tulsa, Okla. John Carnes, Muskogee, Okla., secretary.

Foreign Meetings

Second International Congress of Physiology and Pathology of Animal Reproduction and of Artificial Insemination. The Royal Veterinary and Agricultural College, Copenhagen, Denmark, July 7-11, 1952. Ed. Sorensen, the Royal Veterinary and Agricultural College, Bulowsvej 13, Copenhagen V, Denmark, secretary general.

Fifteenth International Veterinary Congress. Stockholm, Sweden, Aug. 9-15, 1953. Dr. L. de Blieck, Soestdijkseweg 113N., Bilthoven, Netherlands, secretary, Permanent Committee. (U. S. Committee: Dr. W. A. Hagan, N. Y. State Veterinary College, Ithaca, N. Y., chairman; Dr. J. G. Hardenbergh, 600 S. Michigan Ave., Chicago 5, Ill., secretary.)

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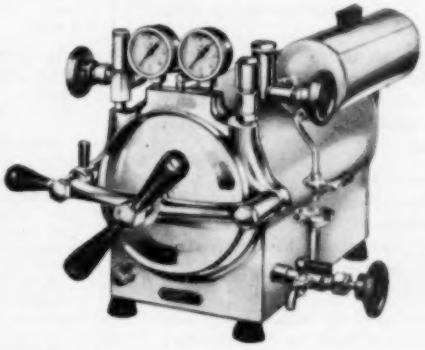

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Twenty-five words or less, $2.50; 8 cents for each additional word. Replies sent in care of the JOURNAL, 25 cents extra.

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Deadline for want ads 8th of month preceding date of issue.

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Wanted—Veterinarians

WANTED GRADUATE VETERINARIAN—to take charge of meat inspection, and sanitation, at packing plant under health department supervision. Beginning salary $5,000. If interested, contact Grand Rapids, Mich., Health Department, immediately.

RETIRED VETERINARIAN WANTED—$200.00 month with furnished apartment above hospital included, to be on the premises between 8 p.m. and 8 a.m. Very little to do; attendant also on at these hours. Address "Box Y 17," c/o JOURNAL of the AVMA.

WANTED VETERINARIAN—with journalistic background to edit house organ and handle public relations. Excellent opportunity for qualified individual. Write Norden Labs., Lincoln, Nebr.

WANTED VETERINARIAN—to conduct pharmaceutical and biological research in addition to product control, and supervisory capacity with midwestern pharmaceutical laboratory. Replies should include previous experience, salary requirements, and personal data. Address "Box Y 2," c/o JOURNAL of the AVMA.

WANTED VETERINARIAN—for small animal hospital in the Midwest. Small apartment available. Address "Box Y 13," c/o JOURNAL of the AVMA.

WANTED VETERINARIAN—as assistant in well-established small animal hospital in Chicago area. Good salary. Give full information as to

(*Continued on p. 40*)

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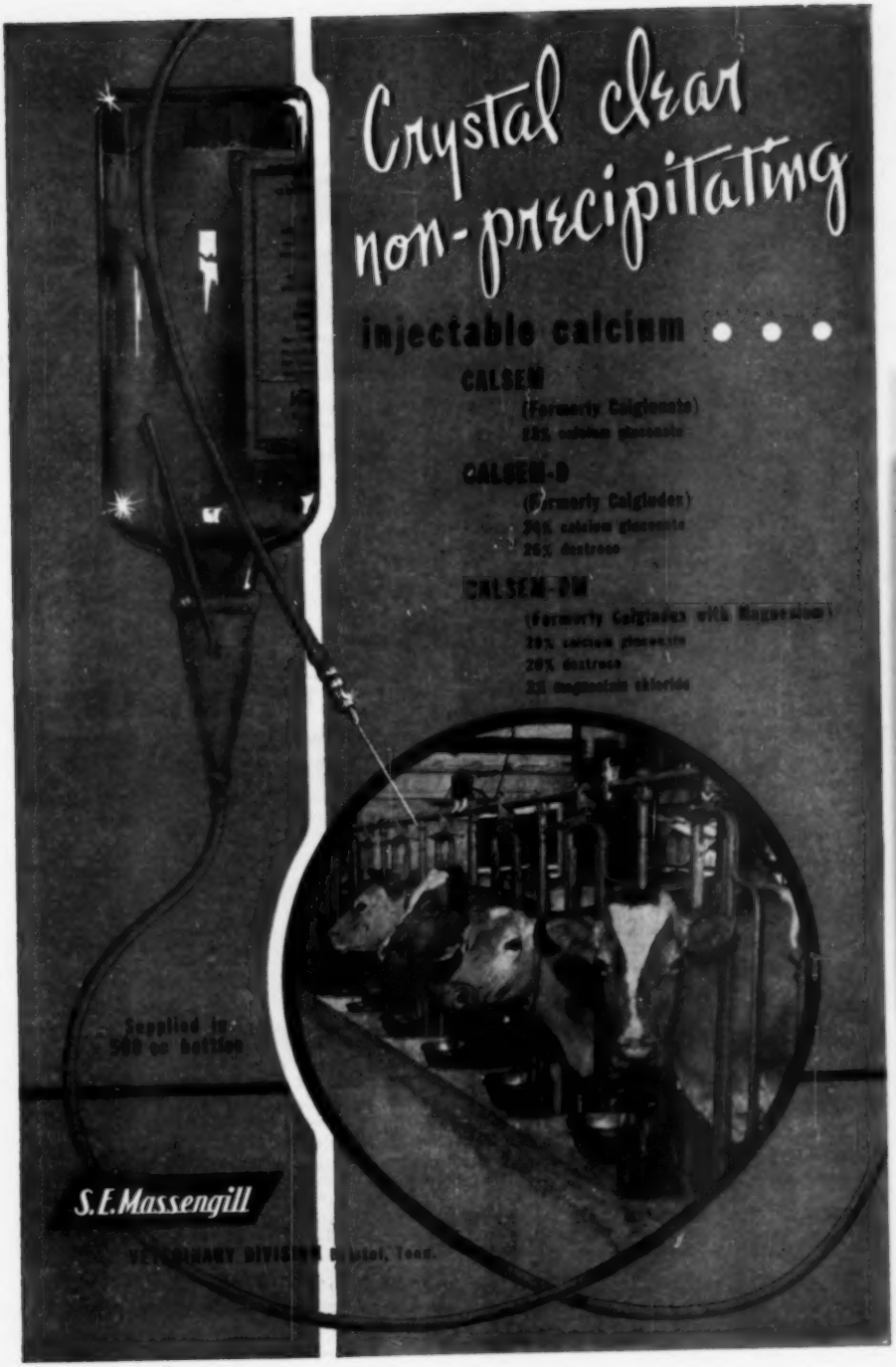
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(CLASSIFIED ADS—*Continued from p. 38*)

training and experience in first letter. Address "Box Y 5," c/o JOURNAL of the AVMA.

VETERINARIAN WANTED—by veterinary research division of major company with widespread livestock interests, for clinical research and service work primarily in diseases of poultry. Must be recent graduate of AVMA-approved school, with interest and preferably experience in poultry disease control. Send detailed qualifications and picture to "Box Y 7," c/o JOURNAL of the AVMA.

WANTED VETERINARIAN—to assist in small animal hospital in Chicago. Married man preferred. Excellent salary and percentage, plus six-room apartment. State age, experience, state registration, marital status, and enclose photograph in first letter. Address "Box Y 8," c/o JOURNAL of the AVMA.

WANTED KENNEL MAN—small animal hospital, New Haven, Conn. Experienced, sober, good clipper. Top salary and apartment available. References required. Write giving full particulars. Address "Box Y 9," c/o JOURNAL of the AVMA.

VETERINARIAN WANTED—opportunity for practitioner interested in active race track practice. Will work with man until established. Retiring, ill health. Address "Box Y 11," c/o JOURNAL of the AVMA.

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(*Continued on p. 46*)

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Also Available in Removable Tray Style, or Plain, Flat Floor Style

Note new style Bar Doors — Heavier (⅜") rods — eliminates brace bar in center. Door frames, top and bottom, made of 1 inch tubes: water runs off instead of remaining on door frame.

IMPROVED DOG DRYER WITH ENTIRELY TRANSPARENT DOORS

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The 1952 price list is now available

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Authoritative information on the scientific care and feeding of dogs. Published by Albers Milling Company (a division of Carnation Company) under the supervision of Dr. E. M. Gildow, B.S., M.S., D.V.M., Director of Research.

No. 14

DOG RESEARCH NEWS

Laxation in Puppies

A deviation from a normal stool does not always mean that the dog is not in good health, since a considerable difference exists in the stools of dogs of various ages.

Very young puppies usually pass a stool that is not necessarily well formed, and that may be greenish or greenish-yellow in color. Yet this may still be normal. Rapidly growing puppies usually produce a dropping that is formed during the first part of the passage and that may lack form during the latter part.

Such laxation, due to the age of the dog, need cause no worry. Moreover, many other causes of laxation may be avoided by feeding a reputable commercial dog food like Friskies. The complete nourishment of a scientifically balanced dog food like Friskies will contribute its full share toward maintaining the puppy in a healthy condition.

Good digestion depends upon a dog enjoying its food

Palatability and Digestion

A dog, like a man, must enjoy food in order to stimulate the flow of digestive juices. Coarseness or large size particles increases digestion of a dog food. The coarseness causes it to remain in the digestive tract long enough to take full advantage of the digestive juices.

Furthermore, there is variety in Friskies' coarsely ground particles themselves, so that the tongue passing over them encounters a variety of tastes, and so stimulates digestion. Thus Friskies is palatable and at the same time digestible.

All ingredients in Friskies are constantly checked to maintain highest possible quality

Nutrition Affects Future Generations

While it is true that a mature dog can get by for a while on an inadequate diet, each succeeding generation suffers from the inadequate feeding of the parent stock. That is why the ultimate test of a dog food is to feed it for at least three generations, as is done at the Friskies Research Kennels on the famous Carnation Milk Farm which has produced healthy, robust dogs fed entirely on Friskies.

HAVE A QUESTION about dog breeding, feeding and care? Write Friskies, Dept. Y, Los Angeles 36, Calif.

"20 YEARS OF KEEPING DOGS FRISKY"

Friskies DOG FOOD MEAL
Friskies DOG FOOD CUBES
5 SIZES: 50, 25, 10, 5, 2 lbs.
A FRISKY DOG IS A HEALTHY DOG
KEEP YOUR DOGS FRISKY WITH
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A COMPLETE DOG FOOD

PERANDREN gave them a helping hand

This litter of healthy whelps may owe its existence to the aid of PERANDREN. This most powerful of the male sex hormones is making excellent therapeutic history in the treatment of selected cases of sexual impotence in small and large animals. One report cites tying within 48 hours after injection of PERANDREN* with subsequent birth of healthy pups.

Too often one or more of the weaklings in a litter are lost within the first few hours after birth. CORAMINE, has proven of value in giving weaklings sufficient initial stimulation to save them. The therapeutic dosage is so markedly less than the toxic dose of CORAMINE* that little fear need attend its use.

Vials of 10 cc.	
10 mg per cc.	$1.60
25 mg per cc.	2.60
50 mg per cc.	5.20

PERANDREN
the masculinizing hormone

Trade Marks Reg. U.S. Pat. Off.
A CIBA PRODUCT

GOSHEN LABORATORIES, INC.
GOSHEN, NEW YORK

Correspondence

July 7, 1952

The Editors:

Received the July issue of the JOURNAL today. The article, "An Important Fire Hazard" (July, p. 29), interested me.

The same thing happened to me on June 6 at 6:30 in the evening. A gallon of mineral oil was the offender again but only the seat covers started on fire. I also placed the jug in another position and immediately started another part of the seat covers burning.

Luck was with me, however; my car was standing by the unloading chute at the local sales barn, and a woman standing by while her husband was unloading stock noticed the smoke. As the result this woman and her two youngsters were duly filled with ice cream at the lunch counter.

Yours very truly,

E. G. Hughes, D.V.M., *Sleepy Eye, Minn.*

Announces New Feed Supplement

After two years of laboratory and field experimental work, Vitamineral "A to Z" antibiotic feed supplement has been announced by the Vitamineral Products Co., Peoria, Ill. According to the company, it combines in one ready-to-use mixture the antibiotics, vitamins, iodine, major and trace minerals that heretofore have had to be added separately to home and local mill-made feeds. Exhaustive field tests show, it is claimed, that this feed supplement makes it possible to wean pigs earlier, increase daily gains on less feed, get more uniform litters with fewer setbacks, reduce the death loss, and cut down the feeding of high-cost proteins.

ARMOUR & CO., packers, will soon set up a laboratory in Argentina to process glands from slaughtered cattle. They will produce insulin, trypsin, and ACTH.

What should we feed him?
Is meat alone enough?
Does he need change in his diet?
Are table scraps good for him?
Is there a dog food that's really complete?

There's no question about it when you RECOMMEND PARD

Better for a dog than red raw meat

Most of the eager questions people ask about dog feeding can be answered in one word—"PARD"!

For with Pard, a dog needs nothing more, can get nothing better. Swift makes this famous dog food with all the good meat protein dogs love, *plus* all the other important nutrients they need.

Read the table and see why Swift's Pard is the perfectly balanced, complete food you can recommend with assurance!

A COMPLETE, BALANCED FOOD

containing:

Vitamins • Minerals • Meat Protein
Wheat • Irradiated Yeast • Fish Liver Oil
Barley • Soy Flour • Ground Edible Bone

Check these nutrients in a 1-lb. can of Pard against those in any other prepared dog food you know!

Protein	52.0 gms.	Vitamin A	550.0 units
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Fat	14.7 gms.	Thiamine	1.41 mgs.
Iron	22.7 mgs.	Riboflavin	1.88 mgs.
Calcium	2.0 gms.	Niacin	18.2 mgs.
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Energy: 100% of daily caloric needs for average-size (20-lb.) dog

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HIGH POTENCY DOSAGE FORM

containing 100,000 units of penicillin in each individually foil-wrapped bougie.

		Now Only
	25's	$4.75
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NEW Package of	500's	80.00

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- Treat the infected cow at drying-off for the highest percentage of cures in cases intractable during lactation*, and for the least loss of milk.
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*Schalm, O. W., and Ormsbee, R. W.: J. A. V. M. A. 115:464 (Dec.), 1949.

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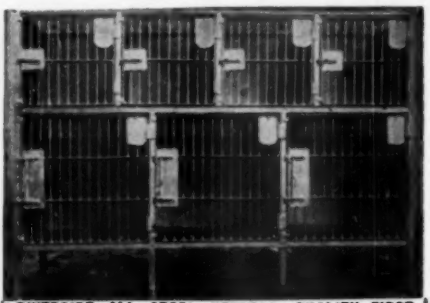

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REFERENCES

1. Roberts, S.J., J.Am.Vet.M.A. *116*:282, Apr. 1950.
2. Beyer, K.H., *et al.*, J.Pharmacol.&Exper.Therap. *93*:388, Aug. 1948.

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WANTED VETERINARIAN—for teaching and research. Position in a recognized veterinary school. Subject, Bacteriology and Virology. Address "Box Y 16," c/o JOURNAL of the AVMA.

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POSITION WANTED—veterinarian, Vienna graduate, desires position in small animal hospital in Canada. Experience in Vienna, and sixteen months practice in small animal hospital in Canada. Age 33. Address "Box Y 1," c/o JOURNAL of the AVMA.

WANTED—Captain, U.S.A.F., V.C., available October 15, 1952. Age 30 years, Protestant, married, children. Seven years experience large and small animal. Desires permanent position as practitioner. Will work with or buy good practice. Size town not important but must have good schools. Excellent practice and character references furnished on request. Willing to live in most parts of United States, but prefer Midwest or Rocky Mountains. Graduate Colorado A and M. Address "Box X 5", c/o JOURNAL of the AVMA.

Veterinarian, A.P.I. Class 38, married and family, seeks position with another in mixed practice on

(*Continued on p. 50*)

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Treatment	Dose	No. of Cases	Recovered and Conceived	Recovered and Sterile	Recovered (but outcome unknown)	Relapsed	No Results	Per Cent Recovery	Per Cent Conceived*
Follutein[1]	10,000 I.U.	28	23	3	3	1	0	96.4%	85.1%
Sheep Pituitary	1.2 gms. equiv. sheep pituitary	38	19	7	4	6	2	78.8%	50.0%
Preg. Mare Serum	1500 - 3000 R.U.	14	5		1		8	42.9%	38.2%

*This is based on the cases where the outcome is known.

[1] Supplied by E. R. Squibb & Sons, New York City

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CYSTIC OVARIES

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The results of treatments with Squibb Follutein and two other products—dried sheep pituitary extract and pregnant mare serum—are shown in the box on the opposite page.

In reference to these treatments, an Annual Report[1] of the New York State Veterinary College at Cornell has this to say:

"All three products have value and have been employed in cystic ovaries in cattle but chorionic gonadotropin (Follutein) in our short uncontrolled experiments has been exceptionally useful, provided no serious pathology existed other than cystic ovaries."

Follutein Squibb is a sterile preparation of chorionic gonadotropin, the anterior pituitary-like sex hormone isolated from the urine of pregnant women. The dose is 10,000 units. Inject deep into a muscle. Follutein is supplied in 10,000 unit (one dose) packages, with diluent.

Reprints on hormonal therapy are available upon request. E. R. SQUIBB & SONS, *Veterinary and Animal Feeding Products Division,* 745 Fifth Avenue, New York 22, N. Y.

*Trademark [1]1946-47, Number 27A, pages 113-114

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(CLASSIFIED ADS—*Continued from p. 46*)

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Wanted—Practices

WANTED TO BUY OR LEASE—good mixed practice. Southern California preferred. Write full details. Address "Box Y 6," c/o JOURNAL of the AVMA.

PRACTICE WANTED—veterinarian 30 years old, graduate of a recognized school desires small animal hospital. Is married and has four children. Has run own successful mixed practice for nine years, but now desires to get into a small animal practice. Capable of handling any type of practice. Is interested in taking over from an older man or in starting a practice where there is need for a small animal hospital. Prefer the west coast or far western states. Address "Box Y 10," c/o JOURNAL of the AVMA.

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PRACTICE WANTED—If you have a practice to sell in Mass., or Conn., or would like experienced veterinarian to work into your practice, please reply. Address "Box Y 28," c/o JOURNAL of the AVMA.

(*Continued on p. 52*)

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More kennel operators and dog trainers...to discover the nutritional benefits of Ken-L-Meal

30-day test feeding will prove, beyond a doubt, that Ken-L-Meal is tops in providing dogs with complete and appetizing nutrition. This is the famous 30-day test that professionals all over the country have made and praised.

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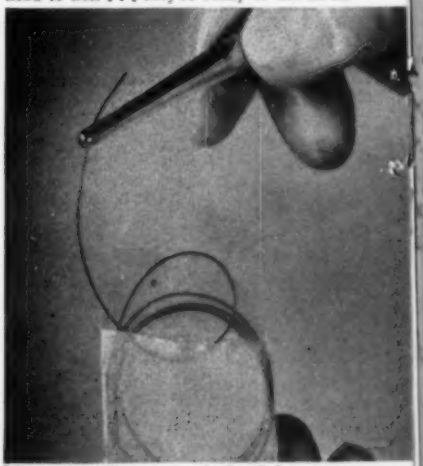

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